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13 JUN 1990

WIDEBAND COMMUNICATIONS EQUIPMENT

GROUND RADIO COMMUNICATION

SPACE COMM SYSTEMS EQUIPMENT

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ELECTE

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AD-A223 622

STANDARD FORM 10-65
Approved for
Distribution Unlabeled

304X0/X4/X6

APPENDIX A

FAIR ANALYSIS

MAY 1990

96 06 26 020

APPENDIX A

Purpose

This Appendix provides task analysis data for the Wideband Communications Equipment, Ground Radio Communications, and Space Communications Systems Equipment/Operator specialties, AFSCs 304X0/4/6. Data contained in this document are the result of a detailed Training Requirements Analysis (TRA) conducted during February through October, 1989. Task analysis data provided the basis for the specific training recommendations provided in the TRA report. This Appendix is provided for use in developing resident and nonresident training programs. Copies are available to Air Force training and management officials. Address requests to USAFOMC/OMT, Randolph AFB, Texas 78150-5000.

*Keywords: Wideband Communications Equipment, Communication
and Radio Systems, Appendix, TRA, Task Analysis. (JG)*

Format

1. TASK #: A unique number is assigned to track each TRA task.
2. TASK: A work action. TRA tasks may subsume closely related USAF Job Inventory statements or statements from other sources, such as Task Training Tables (TTT) or Work Center Assigned Task Lists. Each TRA task is documented on a separate TAW.
3. DUTY CODE: Indicates the last two digits of the AFSC which has the primary responsibility for performing this task.
4. TASK STATUS: Indicates the training recommendation for this task. A "K" indicates knowledge level (familiarization) training is recommended. A "P" is used to recommend follow-on training to the performance level. Training may be provided during the initial, 3-skill level, resident course designated by "R" or during on-the-job-training designated by "OJT." For example, "3R-KP" is a recommendation for knowledge and performance training during the 3-skill level awarding resident course.
5. TIMES ANALYZED: The number of who provided information about this task.
6. TASK NOTES: The following information was collected for each task.
 - a. CONSEQUENCES: What are the consequences of inadequate task performance in terms of:
 - 1) MISSION: NONE, MINOR, SERIOUS
 - 2) EQUIPMENT DAMAGE: NONE, DAMAGE
 - 3) INJURY TO PERSONNEL: NONE, INJURY
 - b. HOW OFTEN: How often is the task performed?
 - c. OJT TRAINABLE: Could this task be trained during OJT to:
 - 1) Current Technical School Graduates: YES, NO

2) Basic Training Graduates: YES, NO

d. QTP ADEQUATE: YES, NO, NONE, COMMENTS

e. QTP REFERENCE(S): QTP number, N/A

f. TTT: If available, the TTT-recommended skill level for task performance is recorded.

g. SME OPINION: The skill level at which the interviewed technicians recommend the task be performed.

h. Other notes may be entered here, as necessary.

7. EQUIPMENT: What equipment, tools, supplies, etc, are required to perform the task?

8. REFERENCES: What references are used to perform the task?

9. CONDITIONS: What special conditions (environmental, time constraints, etc) effect task performance?

10. CUES: What causes you to perform the task? How do you know the task must be performed?

11. STANDARDS: What criteria would the supervisor use to determine the task has been adequately accomplished?

12. OSR DATA: Lists data from the OSR for the JI statements SMEs matched to the TRA task. TASK is the number of the JI statement. TE is the training emphasis rating for the JI statement. 1JOB is the percentage of personnel in their first job who perform the JI statement. 1ENL is the percentage of personnel in their first enlistment who perform the JI statement. 5SKL is the percentage of 5-skill level personnel who perform the JI statement. 7SKL is the percentage of 7-skill level personnel who perform the JI statement. TD is the task difficulty rating for the JI statement. ATI is the automated training indicator for the JI statement.

13. ACTIVITIES SKILL KNOWLEDGE: TRA analysts interviewed subject matter experts and reviewed technical references to identify activity, skill, and knowledge behaviors required for task performance. Many of the behaviors required for task performance were taken directly from the Electronic Fundamentals/Applications list, from which attachment 2 to the STS is derived and the OSRs for AFSCs 304X0/4/6. These activity skill and knowledge behaviors may be found in Appendix B. The following definitions were used in this TRA.

a. Activities are "sets of related behaviors" which have a "common purpose." Activities summarize detailed procedural steps, such as those specified in Technical Orders.

b. Skills and knowledge are prerequisite abilities which support task performance but are not themselves part of the steps for accomplishing the task. In this TRA, troubleshooting or fault isolation abilities are

classified as knowledge because the essential component of this behavior is the mental ability or decision process used to determine the problem.

c. Activities, skills, and knowledge are designated as A, S, and K, respectively.



STATEMENT "A" per Dr. L. Aslett
USAF Occupational Measurements Center/
ONTO, Randolph AFB, TX 78150
TELECON 6/26/90

VG

Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By <u>per call</u>	
Distribution /	
Availability Codes	
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TASK #: 00010
INSPECT AMS-1X00 AUTOMATIC MASTER STATION COMPUTER SYSTEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL AMS-1X00 AUTOMATIC
MASTER STATION MANUAL, AND T.O. 00-25-234

TTT: 5
SME OPINION: 3
EQUIPMENT:
SOFT BRISTLE BRUSH, VACUUM CLEANER, ELECTROSTATIC DISCHARGE STRAP
AND MAT

REFERENCES:
ROCKWELL INTERNATIONAL AMS-1X00 AUTOMATIC MASTER STATION
MANUAL, T.O. 00-25-234

CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1081 2.43 17.0 15.0 10.0 5.0 4.21 7.0

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A VACUUM AND BRUSH SURFACES
A REMOVE AND CLEAN FILTER

OSR JOB INVENTORY TASK STATEMENTS:
0 Q1081 A PERFORM PMI ON AUTOMATIC FAULT SENSING AND SWITCHING
NETWORKS

TASK #: 00020
MONITOR EQUIPMENT FAULT ALARMS WITH AMS-1X00 AUTOMATIC MASTER STATION
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: DAILY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL AMS-1X00 AUTOMATIC
MASTER STATION MANUAL

TTT: 5
SME OPINION: 3
REFERENCES:

ROCKWELL INTERNATIONAL AMS-1X00 AUTOMATIC MASTER
STATION MANUAL

CONDITIONS CUES:

COND: AT AMS-1X00 CRT AND KEYBOARD
CUE: CRT FAULT ALARM, TEC CONTROL COMPLAINT

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0155 4.11 47.0 31.0 25.0 19.0 3.67 12.0
304X0 G 0156 5.67 62.0 50.0 43.0 35.0 5.10 18.0

ACTIVITIES SKILL KNOWLEDGE:
A SELECT STATION TO MONITOR
A SELECT FUNCTIONS TO BE MONITORED
A NOTE FAULT ALARMS INDICATED ON CRT
A ACKNOWLEDGE ALARM
K RECALL SIGHT ABBREVIATIONS
K RECALL CRT KEYBOARD OPERATION

OSR JOB INVENTORY TASK STATEMENTS:
0 G0155 A OBSERVE STATUS DISPLAY PANELS TO DETERMINE EQUIPMENT
OPERATION (SIGNAL QUALITY)
0 G0156 A OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL
ANALYZERS, TO DETERMINE EQUIPMENT OPERATION

TASK #: 00030
REMOTELY SWITCH EQUIPMENT WITH AMS-1X00 AUTOMATIC MASTERSTATION
DUTY CODE: X0
TASK STATUS: 3R-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: INDEFINITE, HAVE NOT DONE YET
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL AMS-1X00 AUTOMATIC
MASTER STATION MANUAL

TTT: 3
SME OPINION: 3
REFERENCES:
ROCKWELL INTERNATIONAL AMS-1X00 AUTOMATIC MASTER
STATION MANUAL

CONDITIONS CUES:
COND: AT CRT AND KEYBOARD
CUE: FAULT ALARM LIGHT, USER COMPLAINT

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0184 4.33 44.0 36.0 29.0 22.0 3.19 12.0

ACTIVITIES SKILL KNOWLEDGE:
A SELECT NETWORK
A SELECT STATION
A SELECT EQUIPMENT
A SWITCH EQUIPMENT
K RECALL SIGHT ABBREVIATIONS
K RECALL CRT KEYBOARD OPERATION

OSR JOB INVENTORY TASK STATEMENTS:
0 G0184 A PERFORM SWITCHOVERS OF EQUIPMENT SUBASSEMBLIES TO
REDUNDANT EQUIPMENT

TASK #: 00040
INSPECT DMX-2003 MULTIPLEXER/DEMULITPLEXER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL DMX-2003 DIGITAL
MULTIPLEXER/DEMULITPLEXER MANUAL

TTT: 3
SME OPINION: 3
EQUIPMENT:
SOFT BRISTLE BRUSH, VACUUM CLEANER

REFERENCES:
ROCKWELL INTERNATIONAL DRX-2003 DIGITAL
MULTIPLEXER/DEMULITPLEXER MANUAL

CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0661 4.33 16.0 16.0 12.0 8.0 4.75 11.0

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A VACUUM AND BRUSH EXTERIOR SURFACES

OSR JOB INVENTORY TASK STATEMENTS:
0 M0661 A PERFORM PMI ON TIME DIVISION MULTIPLEXERS

TASK #: 00650
TROUBLESHOOT DMX-2003 MULTIPLEXER/DEMULITPLEXER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL DMX-2003 DIGITAL MULTIPLEXER/DEMULITPLEXER
TTT: 3
SME OPINION: 3
REFERENCES:
ROCKWELL INTERNATIONAL DMX-2003 DIGITAL MULTIPLEXER/DEMULITPLEXER MANUAL
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: FAULT ALARM, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0236 3.04 40.0 40.0 40.0 26.0 3.50 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ATTACH ELECTROSTATIC GROUNDING STRAP
A RESEAT CIRCUIT CARD INDICATED BY FAULT ALARM
A REPLACE CIRCUIT CARD IF RESEATING DOES NOT CLEAR FAULT
A CHECK STATUS LIGHTS FOR CORRECT OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
0 I0236 A REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER THAN SOLDERING

TASK #: 00060
MANUALLY SWITCH DMX-2003 MULTIPLEXER/DEMULITPLEXER
DUTY CODE: X0
TASK STATUS: 3R-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL DMX-2003 MULTIPLEXER/DEMULITPLEXERR MANUAL
TTT: 3
SME OPINION: 3
REFERENCES:
ROCKWELL INTERNATIONAL DMX-2003 MULTIPLEXER/DEMULITPLEXER MANUAL
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT MAY BE RELEASED
CUE: ALARM INDICATION, EQUIPMENT DOES NOT AUTOMATICALLY TRANSFER TO SPARE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0184 4.33 44.0 36.0 29.0 22.0 3.19 12.0
ACTIVITIES SKILL KNOWLEDGE:
A VERIFY SPARE EQUIPMENT IS AVAILABLE AND OPERATIONAL
A SELECT GROUP TO TRANSFER WITH GROUP SELECT BUTTON
A VERIFY EQUIPMENT TRANSFERS AS PROGRAMMED
OSR JOB INVENTORY TASK STATEMENTS:
0 G0184 A PERFORM SWITCHOVERS OF EQUIPMENT SUBASSEMBLIES TO REDUNDANT EQUIPMENT

TASK #: 00078
INSPECT AN/FCC-19 AND AN/FCC-25 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: 28, 56, WEEKLY (NON T.O. BY TECH CONTROL USING
REMOTE PATCH PANEL)
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO (DOES NOT COVER ANCILLARY TEST EQUIPMENT USED
FOR SYSTEM)
TNG REFERENCE(S): QTP 304X0-30F
TTT: 3
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, TELETYPE TEST SET, TRANSMISSION TEST SET,
HAND TOOLS, VACUUM CLEANER, GENERAL PURPOSE CLEANING SOLVENT,
FREQUENCY COUNTER
REFERENCES:
T.O. 31W2-2FCC19-1
CONDITIONS CUES:
COND: POWER ON
CUE: PMI, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0747 2.93 19.0 16.0 14.0 5.0 4.56 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM USER PATCH OFF PROCEDURES
A PERFORM POWER SUPPLY DC VOLTAGE CHECK
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A PERFORM SERIAL AND PARALLEL CLOCK SIGNALS
A PERFORM TRANSITION AND PARALLEL DATE OUTPUT SIGNAL
CHECK
A CLEAN CABINET INTERIOR/EXTERIOR
A ALIGN/ADJUST BIAS AND OUTPUT SIGNAL
A PERFORM KEYER OUTPUT FREQUENCY CHECK
A PERFORM CENTER FREQUENCY AND BIAS WAVEFORMS CHECK
OSR JOB INVENTORY TASK STATEMENTS:
0 N0747 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
TELETYPE MULTIPLEXER ASSOCIATED INTERFACE EQUIPMENT

TASK #: 00688
TROUBLESHOOT AN/FCC-19 AND AN/FCC-25 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS FUNDAMENTALS)
QTP ADEQUATE: NO (DOES NOT COVER ANCILLARY TEST EQUIPMENT USED
FOR SYSTEM)
TNG REFERENCE(S): QTP 304X0-30F
TTT: 3
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, TELETYPE TEST SET, TRANSMISSION TEST SET,
HAND TOOLS, DIGITAL MULTIMETER, FREQUENCY COUNTER
REFERENCES:
T.O. 31W2-2FCC19-1
CONDITIONS CUES:
COND: POWER ON, PATCH OFF USER
CUE: PMI FINDING, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1008 2.46 9.0 9.0 6.0 5.0 6.40 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY KEYER
K ISOLATE FAULTY CONVERTER
K ISOLATE FAULTY PATCH PANEL BROKEN WIRES
K ISOLATE FAULTY BITE (EQUIPMENT NOT USED FOR TESTING)
K APPLY THEORY OF OPERATION FOR ANALOG-TO-DIGITAL AND
DIGITAL-TO-ANALOG CONVERTERS
A REMOVE/REPLACE SUBASSEMBLY COMPONENT: MD PARTS

OSR JOB INVENTORY TASK STATEMENTS:
0 Q1008 K ISOLATE MALFUNCTIONS IN ANALOG-TO-DIGITAL CONVERTERS

TASK #: 00090
TROUBLESHOOT AN/FCC-19 AND AN/FCC-25 MULTIPLEXER KEYER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO (DOES NOT COVER ANCILLARY TEST EQUIPMENT USED
FOR SYSTEM)
TNG REFERENCE(S): QTP 304X0-30F
TTT: 3
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, TELETYPE TEST SET, TRANSMISSION TEST SET,
HAND TOOLS, DIGITAL MULTIMETER, FREQUENCY COUNTER, SOLDERING
KIT
REFERENCES:
T.O. 31W2-2FCC19-1
CONDITIONS CUES:
COND: KEYER IS ON EXTENDER CARD THEN ON BENCH
CUE: FAILURF OF KEYER COMPONENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0738 2.93 29.0 23.0 20.0 10.0 5.2 11.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY KEYER COMPONENTS
K APPLY THEORY OF OPERATION FOR ANALOG-TO-DIGITAL AND
DIGITAL-TO-ANALOG CONVERTERS
A REMOVE/REPLACE KEYER COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 R0738 K ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT KEYERS

TASK #: 00100
TROUBLESHOOT AN/FCC-19 AND AN/FCC-25 MULTIPLEXER CONVERTER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO (DOES NOT COVER ANCILLARY TEST EQUIPMENT USED
FOR SYSTEM)
TNG REFERENCE(S): QTP 304X0-30F
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, TELETYPE TEST SET, TRANSMISSION TEST SET
FREQUENCY COUNTER, OSCILLOSCOPE, HANDTOOLS, SOLDERING KIT
REFERENCES:
T.O. 31W2-2FCC19-1
CONDITIONS CUES:
COND: CONVERTER ON EXTENDER CARD THEN ON BENCH
CUE: PMI FINDING, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0737 2.93 27.0 21.0 18.0 10.0 5.86 11.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CONVERTER TRANSISTORS
K ISOLATE FAULTY CONVERTER FILTER
K ISOLATE FAULTY CONVERTER RELAYS
K ISOLATE FAULTY POWER SUPPLY FUSES
K ISOLATE FAULTY CONVERTER ADJUSTABLE RESISTORS
K APPLY THEORY OF OPERATION FOR ANALOG-TO-DIGITAL AND
DIGITAL-TO-ANALOG CONVERTERS
A REMOVE/REPLACE COMPONENTS AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
0 N0737 K ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT CONVERTERS

TASK #: 00110
ALIGN/ADJUST AN/FCC-19 AND AN/FCC-25 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO (DOES NOT COVER ANCILLARY TEST EQUIPMENT USED
FOR SYSTEM)
TNG REFERENCE(S): QTP 304X0-30F
TTT: 5
SME OPINION: 3
EQUIPMENT:
TRANSMISSION TEST SET, TELETYPE TEST SET, DIGITAL MULTIMETER
FREQUENCY COUNTER, OSCILLOSCOPE, COMMON HANDTOOLS
REFERENCES:
T.O. 31W2-2FCC19-1
CONDITIONS CUES:
COND: POWER ON, PATCH OFF USER
CUE: PMI FINDING, COMPONENT REPLACEMENT, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0959 3.02 15.0 15.0 1.2 8.0 1.46 11.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST BIAS AND OUTPUT SIGNAL
A CALIBRATE BITE EQUIPMENT (NOT DONE DUE TO LACK OF USE
AND PARTS)
A ALIGN/ADJUST CENTER COINCIDENCE FREQUENCY AND BIAS
A ALIGN/ADJUST KEYER OUTPU
K APPLY THEORY OF OPERATION FOR ANALOG-TO-DIGITAL
DIGITAL-TO-ANALOG CONVERTERS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0959 A ADJUST ANALOG-TO-DIGITAL CONVERTER COMPONENTS

TASK #: 00120
INSPECT THE AN/FCC-100 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 5
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 300X-30%, THEY DON'T USE IT
TTT: 3
SME OPINION: 3
EQUIPMENT:
HAND TOOLS, VACUUM CLEANER
REFERENCES:
T.O. 31W1-2FCC100-1
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0660 4.11 13.0 16.0 12.0 6.0 4.87 11.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK FAULT STATUS AND POWER SUPPLY STATUS LIGHTS PER
T.O.
A REMOVE, CLEAN, AND REPLACE POWER SUPPLY FAN FILTER
A REMOVE, CLEAN, AND REPLACE MODULE ACCESS PANEL FILTER
OSR JOB INVENTORY TASK STATEMENTS:
0 M0660 A PERFORM PMI ON TIME DIVISION MULTIPLEXER ASSOCIATED INTERFACE EQUIPMENT

TASK #: 00130
CONFIGURE AN/FCC-100 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3R-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, NO, DATA TRANSMISSION PRINCIPLES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W1-2FCC100-1
TTT: 5
SME OPINION: 3
REFERENCES:
T.O. 31W1-2FCC100-1
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: CHANGE IN CIRCUIT REQUIREMENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0251 3.22 41.0 39.0 39.0 25.0 3.96 12.0
304X0 M 0721 1.48 18.0 16.0 15.0 10.0 4.43 2.0
304X0 G 0155 4.11 47.0 31.0 25.0 19.0 3.67 12.0
ACTIVITIES SKILL KNOWLEDGE:
A REPLACE CIRCUIT CARDS AS NEW CONFIGURATION REQUIRES
A PROGRAM NEW CONFIGURATION INTO MEMORY THROUGH KEY-
BOARD
A ACTIVATE NEW CONFIGURATION THROUGH KEYBOARD
A CHECK STATUS LIGHTS FOR CORRECT OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
0 G0155 A OBSERVE STATUS DISPLAY PANELS TO DETERMINE EQUIPMENT
OPERATION (SIGNAL QUALITY)
0 I0251 A REPLACE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER
THAN SOLDERING
0 M0721 A REPLACE TWO WIRE/FOUR WIRE CONVERSION AND TERMINATION
CIRCUITS

TASK #: 00140
TROUBLESHOOT THE AN/FCC-100 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 5
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SIX MONTHS OR ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, THEORY OF TIME
DIVISION MULTIPLEXING
QTP ADEQUATE: ONLY GIVES T.O. REFERENCE
TNG REFERENCE(S): QTP 300X0-30Z, THEY DON'T USE IT
T.O. 31W1-2FCC100-1
TTT: 5
SME OPINION: 3 OR 5
EQUIPMENT:
BITE, EXTERNAL BIT ERROR RATE TESTER, HANDTOOLS
REFERENCES:
T.O. 31W1-2FCC100-1
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: USER COMPLAINT, FAULTY ALARM LIGHT, LOSS OF RECEIVE DATA
RECONFIGURATION OF SYSTEM, INSPECTION RESULTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0236 3.04 40.0 40.0 40.0 26.0 3.60 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A REMOVE/REPLACE CIRCUIT CARDS, COMPONENTS, AND PARTS
- A PERFORM ALARM STATUS CHECK USING KEYPAD
- A PERFORM OUT-OF-SERVICE BITE TEST THROUGH KEYPAD
- A PERFORM LED STATUS CHECKS
- A REFERENCE ALARM INDICATIONS TO T.O. ALARM TABLES
- A CHECK LOGIC STATES AND SIGNAL STATUS USING BUILT-IN LOGIC PROBE
- A CHECK CABLES AND ASSOCIATED PATCHING MODULES
- A VERIFY CIRCUIT CARD STRAPPING AGAINST T.O. STRAPPING TABLE
- A PLACE JUMPER STRAP TO PIN POSITION PER T.O.
- K ISOLATE FAULTY CIRCUIT CARDS

OSR JOB INVENTORY TASK STATEMENTS:

- 0 I0236 A REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER THAN SOLDERING

TASK #: 00150

INSPECT AN/FCC-98(V) MULTIPLEXER SET

DUTY CODE: X0

TASK STATUS: 3-OJT

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, NONE, NONE

HOW OFTEN: 28, 56

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): 31W2-2FCC98-1

TTT: 5

SME OPINION: 3

REFERENCES:

T.O. 31W2-2FCC98-1

CONDITIONS CUES:

COND: ON EQUIPMENT

CUE: PMI

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0660 4.11 13.0 16.0 12.0 6.0 4.87 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CHECK VOLTAGE LEVELS OF POWER SUPPLY
- A PERFORM BITE SELF TEST

CSR JOB INVENTORY TASK STATEMENTS:

- 0 M0660 A PERFORM PMI ON TIME DIVISION MULTIPLEXER ASSOCIATED INTERFACE EQUIPMENT

TASK #: 00160
ADJUST AN/FCC-98(V) VOICE FREQUENCY (VF) MULTIPLEXER SET
VOICE FREQUENCY (VF) MODULE CHANNEL LEVELS
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, SYSTEM KNOWLEDGE,
DIGITAL ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2FCC98-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
HAND TOOLS, ANALOG MULTIMETER
REFERENCES:
T.O. 31W2-2FCC98-1
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: BITE METER READING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 T 1391 1.48 4.0 6.0 6.0 2.0 4.81 2.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM BITE CHANNEL RECEIVE LEVEL CHECK
A ADJUST VF MODULE RECEIVE GAIN CONTROL
A PERFORM BITE CHANNEL TRANSMIT LEVEL CHECK
A ADJUST VF MODULE TRANSMIT GAIN CONTROL
OSR JOB INVENTORY TASK STATEMENTS:
0 T1391 A ADJUST AUDIO AMPLIFIERS

TASK #: 00170
ADJUST AN/FCC-98(V) DATA TIMING GROUP COMMON VOICE FREQUENCY GAIN LEVEL
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2FCC98-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
HAND TOOLS
REFERENCES:
T.O. 31W2-2FCC98-1
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: RECEIVE OR TRANSMIT CHANNELS OUT OF SPECIFICATIONS BY
COMMON AMOUNT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0630 4.57 18.0 16.0 13.0 10.0 6.18 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM BITE CHANNEL COMMON GAIN CHECK
A ADJUST COMMON GAIN VF RECEIVE FUNCTION
A ADJUST ODD CHANNEL COMMON GAIN VF TRANSMIT FUNCTION
A ADJUST EVEN CHANNEL COMMON GAIN VF TRANSMIT FUNCTION
OSR JOB INVENTORY TASK STATEMENTS:
4 M0630 A OPERATIONALI CHECK MOBILE ANTENNA SYSTEMS

TASK #: 00180
 PERFORM AN/FCC-98(V) VOICE FREQUENCY (VF) MODULE LOOP TEST
 DUTY CODE: X0
 TASK STATUS: 3R-KP
 TIMES ANALYZED: 2
 TNOTES:
 CONSEQUENCES: SERIOUS, NONE, NONE
 HOW OFTEN: MONTHLY
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31W2-2FCC98-1
 TTT: 3
 SME OPINION: 3
 EQUIPMENT:
 HAND TOOLS
 REFERENCES:
 T.O. 31W2-2FCC98-1
 CONDITIONS CUES:
 COND: ON EQUIPMENT, EQUIPMENT RELEASED
 CUE: FOLLOWS VF MODULE CHANNEL LEVEL ADJUSTMENT
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X0 G 0181 4.65 29.0 30.0 30.0 21.0 4.21 12.0
 304X0 G 0156 5.67 62.0 50.0 43.0 35.0 5.10 18.0
 ACTIVITIES SKILL KNOWLEDGE:
 A PERFORM BITE VOICE FREQUENCY FUNCTION LOOP TEST
 A VERIFY BITE METER INDICATIONS PER T.O.
 OSR JOB INVENTORY TASK STATEMENTS:
 0 G0156 A OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL
 ANALYZERS, TO DETERMINE EQUIPMENT OPERATION
 0 G0181 A PERFORM PREOPERATIONAL CHECKS OF EQUIPMENT

TASK #: 00196
 TROUBLESHOOT AN/FCC-98(V) MULTIPLEXER SET
 DUTY CODE: X0
 TASK STATUS: 3R-KP
 TIMES ANALYZED: 2
 TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: MONTHLY
 OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, THEORY OF OPERATION OF
 SYSTEM
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31W2-2FCC98-1
 TTT: 3
 SME OPINION: 5
 EQUIPMENT:
 OSCILLOSCOPE, ANALOG MULTIMETER
 REFERENCES:
 T.O. 31W2-2FCC98-1
 CONDITIONS CUES:
 COND: ON EQUIPMENT, EQUIPMENT RELEASED
 CUE: SYSTEM FAILURE, FAULT ALARM, ALIGNMENT TO T.O.
 SPECIFICATIONS NOT POSSIBLE
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X0 M 0646 4.41 19.0 15.0 13.0 10.0 6.70 11.0
 ACTIVITIES SKILL KNOWLEDGE:
 A CHECK FAULT ALARMS
 A PERFORM BITE METER READING PER T.O.
 A REMOVE AND REPLACE CIRCUIT CARDS
 K ISOLATE FAULTY CIRCUIT CARDS BY VERIFYING WAVEFORMS
 PER T.O.
 OSR JOB INVENTORY TASK STATEMENTS:
 0 M0646 K ISOLATE MALFUNCTIONS IN SOLID-STATE TIME DIVISION MULTIPLEXERS

TASK #: 00200
INSPECT AN/FRA-90 TRANSCEIVER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 28, 56
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30N
TTT: 3
SME OPINION: 3
EQUIPMENT:
VACUUM CLEANER, CLEANING CLOTHS, METER M1 (BITE)
REFERENCES:
T.O. 31R5-2FR-106WC-1
T.O. 31R5-2FR-101
CONDITIONS CUES:
COND: REDUNDANT SYSTEM, ONE TRANSCEIVER ALWAYS ON LINE
CUE: PMI, HIGH BASE BAND NOISE, RCI ALARMS, DAILY MONITORING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1054 2.24 18.0 13.0 10.0 6.0 6.43 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A PERFORM LOCAL AND REMOTE ALARM CHECKS
A PERFORM TRANSCEIVER STATUS INDICATOR CHECKS (METER
M-1)
A CLEAN TRANSCEIVER INTERIOR AND EXTERIOR
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1054 K ISOLATE MALFUNCTIONS IN TRANSCEIVERS

TASK #: 00210
TROUBLESHOOT AN/FRA-90 TRANSCEIVER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
SPECTRUM ANALYZER, SUPER HIGH FREQUENCY GENERATOR, DIGITAL
MULTIMETER, FREQUENCY COUNTER, AUDIO GENERATOR, METER M1 (BITE),
NOISE GENERATOR, NOISE RECEIVER, HANDTOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R5-2FR-101
CONDITIONS CUES:
COND: REDUNDANT, ONE SYSTEM ALWAYS ON LINE
CUE: PMI FINDING, DAILY MONITORING OR REMOTE/LOCAL ALARMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1054 2.24 18.0 13.0 10.0 6.0 6.43 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY MODULES, CIRCUIT CARDS AND COMPONENTS
A REMOVE OR REPLACE MODULES, CIRCUIT CARDS AND COMPO-
ONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1054 K ISOLATE MALFUNCTIONS IN TRANSCEIVERS

TASK #: 00220
ALIGN/ADJUST AN/FRA-90 TRANSCEIVER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30N
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, DIGITAL VOLTMETER, POWER METER WITH POWER SENSOR, ATTENUATOR, SPECIAL EQUIPMENT CABLE/CONNECTORS, FREQUENCY COUNTER, AUDIO SIGNAL GENERATOR, FREQUENCY SELECTIVE VOLTMETER, SPECTRUM ANALYZER, AC VOLTMETER, RF SIGNAL GENERATOR, TRANSMISSION AND NOISE MEASURING SET
REFERENCES:
T.O. 31R5-2FR-101
CONDITIONS CUES:
COND: REDUNDANT SYSTEM, ONE SYSTEM ALWAYS ON LINE
CUE: MODULE REPLACEMENT, SYSTEM OUT OF PARAMETERS, FINDING DURING DAILY CHECK
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1004 2.11 17.0 14.0 11.0 7.0 5.87 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST POWER SUPPLY CIRCUIT CARD ASSEMBLY
A PERFORM RF POWER OUTPUT CHECK
A ALIGN/ADJUST TRANSMIT FREQUENCY
A ALIGN/ADJUST FREQUENCY (TRANSMIT) DEVIATION
A ALIGN/ADJUST BASEBAND TRANSMIT LEVELS
A ALIGN/ADJUST PILOT TRANSMIT LEVEL
A ALIGN/ADJUST LOCAL OSCILLATOR FREQUENCY
A PERFORM AGC SIGNAL CHECK
A ALIGN/ADJUST BASEBAND RECEIVE LEVELS
A ALIGN/ADJUST TRANSCEIVER ALARMS
A ALIGN/ADJUST BASEBAND GAIN
A PERFORM RADIO BALANCE CHECK
A PERFORM FREQUENCY RESPONSE CHECK
A PERFORM RECEIVER RSL VERSUS AGC AND BASEBAND SLOT NOISE TEST
A PERFORM TOTAL AND IDLE NOISE TEST
A ALIGN/ADJUST LOCAL OSCILLATOR ATTENUATOR
K CALCULATE IMPEDENCE MISMATCH USING BASE TEN EQUATIONS
K CONVERT POWER METER READINGS BETWEEN WATTS AND DECIBELS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1004 A ALIGN TRANSCEIVERS

TASK #: 00230
INSPECT AN/FRA-90 TRANSCEIVER POWER SUPPLY
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0 30N
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER
REFERENCES:
T.O. 31R5-2FR-101
CONDITIONS CUES:
COND: POWER IS ON DURING INSPECTION, ONE SYSTEM IS ALWAYS ON LINE
CUE: PMI, MJ. METER IS OUT OF PARAMETER, SYSTEM ALARMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0565 3.80 30.0 27.0 24.0 13.0 4.75 11.0

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A PERFORM POWER SUPPLY METER CHECKS
A MEASURE AGC VOLTAGE FROM ZF SHELF AND METER PANEL
ASSEMBLY WITH DIGITAL MULTIMETER (NON T.O. STEP)
OSR JOB INVENTORY TASK STATEMENTS:
0 L0565 A PERFORM PMI ON FM SHF TRANSMITTERS

TASK #: 00240
TROUBLESHOOT AN/FRA-90 TRANSCEIVER POWER SUPPLY
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30N
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, SOLDERING KIT, HANDTOOLS
REFERENCES:
T.O. 31R5-2FR-16
CONDITIONS CUES:
COND: REDUNDANT SYSTEM WITH ONE SYSTEM ALWAYS ON LINE
CUE: PMI FINDING, MODULE FAILURE RELATED TO POWER, SYSTEM
ALARMS, FUSES CONTINUALLY BLOW
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0725 2.61 22.0 19.0 16.0 8.0 4.48 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY POWER SUPPLY CIRCUIT CARD ASSEMBLY
K ISOLATE FAULTY INDIVIDUAL COMPONENTS
A REMOVE/REPLACE CIRCUIT CARDS AND COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 N0725 A ADJUST DIRECT CURRENT (DC) POWER SUPPLY COMPONENTS

TASK #: 00250
ALIGN/ADJUST AN/FRA-90 TRANSCEIVER POWER SUPPLY
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30N
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, HANDTOOLS
REFERENCES:
T.O. 31R5-2FR-101
CONDITIONS CUES:
COND: POWER IS ON, REDUNDANT SYSTEM IS ON LINE
CUE: COMPONENT REPLACEMENT, POWER SUPPLY IS OUT OF PARAMETERS,
SYSTEM ALARMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0518 2.85 7.0 13.0 15.0 11.0 5.54 11.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST POWER SUPPLY VOLTAGE
OSR JOB INVENTORY TASK STATEMENTS:
0 L0518 A ADJUST SUPER HIGH FREQUENCY (SHF) POWER AMPLIFIER COMPONENTS

TASK #: 00260
INSPECT AN/FRC-96 RADIO SET GROUP
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 1, 7, 14, 28, 56, 84, 168
OJT TRAINABLE: YES, NO, TEST EQUIPMENT
QTP ADEQUATE: NOT USED
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
EQUIPMENT:
AC VOLTMETER, SPECTRUM ANALYZER, SWEEP GENERATOR, DIGITAL
MULTIMETER, FREQUENCY SELECTIVE VOLTMETER, SIGNAL GENERATOR
(RF AND AUDIO), NOISE GENERATOR/RECEIVER, ANALOG MULTIMETER,
OSCILLOSCOPE, POWER METER, FREQUENCY COUNTER, ATTENUATORS,
DIODE DETECTOR, HP-85 COMPUTER, CLEANING SUPPLIES, COMMON HAND
TOOLS
REFERENCES:
T.O. 31R5-2FRC-126WC-1
T.O. 31R5-2FRC-196WC-1
T.O. 31R5-2G-346WC-1
T.O. 31R5-2FRC-106WC-1
T.O. 31R5-2FRC96-16WC-1
T.O. 35E9-94-6WC-1
CONDITIONS CUES:
COND: EQUIPMENT DOWN FOR SOME PORTIONS OF PMI, OUTAGE REQUIRES
COORDINATION, WATER COOLED EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0420 4.52 50.0 39.0 35.0 17.0 4.84 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN EQUIPMENT EXTERIOR AND INTERIOR TO INCLUDE AIR
FILTERS
A LUBRICATE FITTINGS AND BEARINGS
A CHECK METER READINGS
A CHECK VOLTAGE LEVELS
A CHECK VOLTAGE STABILITY
A CHECK RF BANDPASS
A CHECK GAIN LEVELS
A CHECK FREQUENCY LEVELS
A CHECK POWER OUTPUT LEVELS
A CHECK NOISE LEVELS
A CHECK FREQUENCY QUIETING CURVES
A CALIBRATE METERS
A CHECK NOISE/POWER RATIOS
A CHECK BASIC/INTRINSIC NOISE RATIO
A CHECK WATER FLOW RATE
A CHECK FAULT ALARM OPERATION
A SAMPLE COOLANT
A CHECK WAVEGUIDE PRESSURIZATION
A CHECK HEAT EXCHANGER OPERATION
A CHECK DEHYDRATOR OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
0 K0420 A PERFORM PMI ON FM RECEIVERS

TASK #: 00270

TROUBLESHOOT AN/FRC-96 RADIO SET GROUP POWER AMPLIFICATION SYSTEM

DUTY CODE: X0

TASK STATUS: 3-CJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: DAILY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NOT USED

TNG REFERENCE(S): T.O. 31R5-2FRC96-12, T.O. 31R5-2FRC96-13, AND

T.O. 31R5-2FRC96-14

TTT: 5

SME OPINION: 5

EQUIPMENT:

AC VOLTMETER, SPECTRUM ANALYZER, DIGITAL MULTIMETER, HAND TOOLS, ANALOG MULTIMETER, SOLDERING KIT

REFERENCES:

T.O. 31R5-2FRC96-12

T.O. 31R5-2FRC96-13

T.O. 31R5-2FRC96-14

CONDITIONS CUES:

COND: CAN BE TIME CRITICAL, IN SHOP

CUE: FAULT ALARM, USER COMPLAINT, PMI CHECK OUT OF SPECIFICATIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0746 2.20 10.0 8.0 7.0 4.0 6.05 7.0

ACTIVITIES SKILL KNOWLEDGE:

A CHECK FAULT ALARMS

A CHECK METER READINGS

A CHECK VOLTAGE LEVELS AT TEST POINTS

K ISOLATE FAULT FROM EQUIPMENT SUBASSEMBLIES TO INDIVIDUAL COMPONENTS THROUGH CIRCUIT TRACING AND VOLTAGE TESTS

A REMOVE/REPLACE SUBASSEMBLIES, COMPONENTS, OR PARTS

OSR JOB INVENTORY TASK STATEMENTS:

0 N0746 K ISOLATE MALFUNCTIONS IN DC POWER SUPPLY LINE ISOLATION ASSEMBLIES

TASK #: 00280

TROUBLESHOOT AN/FRC-96 RADIO SET GROUP EXCITER/RECEIVER SECTION TO MODULE LEVEL OR MECHANICAL COMPONENT LEVEL

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, NO, SPECIALIZED TEST EQUIPMENT

QTP ADEQUATE: NOT USED

TNG REFERENCE(S): SEE REFERENCES

TTT: 5

SME OPINION: 5

EQUIPMENT:

WIDEBAND AC VOLTMETER, SPECTRUM ANALYZER, DIGITAL MULTIMETER, FREQUENCY SELECTIVE VOLTMETER, SIGNAL GENERATOR (RF AND AUDIO), NOISE GENERATOR/RECEIVER, OSCILLOSCOPE, POWER METER, FREQUENCY COUNTER, ATTENUATORS, DIODE DETECTOR, HP-85 COMPUTER, PYROMETER, RF MILLIVOLTMETER, COMMON HAND TOOLS, SWEEP GENERATOR, ANALOG MULTIMETER, SOLDERING KIT

REFERENCES:

T.O. 31R5-2FRC-122

T.O. 31R5-2FRC-191

T.O. 31R5-2G-342

T.O. 31R5-2G-343

T.O. 31R5-2G-344

T.O. 31R5-2FRC-102

T.O. 31R5-2FRC-103

T.O. 31R5-2FRC-104

T.O. 35E-94-2

CONDITIONS CUES:

COND: CAN BE TIME CRITICAL, IN SHOP

CUE: FAULT ALARM, USER COMPLAINT, PMI CHECK OUT OF SPECIFICATIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0550 3.63 16.0 16.0 16.0 15.0 6.40 11.0

ACTIVITIES SKILL KNOWLEDGE:

A CHECK FAULT ALARMS

A SWITCH TRAFFIC BETWEEN REDUNDANT COMPONENTS TO ISOLATE FAULTY SUBASSEMBLY

A ISOLATE FAULTY MODULE BY CHECKING FREQUENCY, VOLTAGE, AND DB LEVELS

K ISOLATE FAULTY MECHANICAL COMPONENTS

A REMOVE/REPLACE SUBASSEMBLIES, MODULES, AND PARTS

K PERFORM LINEAR TO LOGARITHMIC CONVERSIONS

OSR JOB INVENTORY TASK STATEMENTS:

C L0550 K ISOLATE MALFUNCTIONS IN FM SOLID-STATE SHF TRANSMITTERS

TASK #: 00290

REPAIR AN/FRC-96 RADIO SET GROUP EXCITER/RECEIVER SECTION

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT

QTP ADEQUATE: NOT USED

TNG REFERENCE(S): SEE REFERENCES

TTT: 5

SME OPINION: 5

EQUIPMENT:

DIGITAL MULTIMETER, SIGNAL GENERATOR (AUDIO AND RF),
OSCILLOSCOPE, FREQUENCY COUNTER, ATTENUATORS, DIODE DETECTOR
PYROMETER, RF MILLIVOLTMETER, COMMON HAND TOOLS

REFERENCES:

T.O. 31R5-2FRC-122

T.O. 31R5-2FRC-191

T.O. 31R5-2G-342

T.O. 31R5-2G-343

T.O. 31R5-2G-344

T.O. 31R5-2FRC-102

T.O. 31R5-2FRC-103

T.O. 31R5-2FRC-104

T.O. 35E9-94-2

CONDITIONS CUES:

COND: CAN BE TIME CRITICAL, IN SHOP

CUE: RESULT OF TROUBLESHOOTING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0962 3.07 31.0 29.0 26.0 16.0 3.77 11.0

ACTIVITIES SKILL KNOWLEDGE:

A ALIGN CIRCUIT CARDS

A REMOVE AND REPLACE MECHANICAL COMPONENTS

OSR JOB INVENTORY TASK STATEMENTS:

O Q0962 A ADJUST AUDIO AMPLIFIER COMPONENTS

TASK #: 00300

TROUBLESHOOT AND REPAIR AN/FRC-96 RADIO SET GROUP EXCITER/RECEIVER SECTION MODULES

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: TWO MONTHS

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT

QTP ADEQUATE: NOT USED

TNG REFERENCE(S): SEE REFERENCES

TTT: 5

SME OPINION: 5

EQUIPMENT:

DIGITAL MULTIMETER, SIGNAL GENERATOR (AUDIO AND RF),
OSCILLOSCOPE, FREQUENCY COUNTER, ATTENUATORS, DIODE DETECTOR
PYROMETER, RF MILLIVOLTMETER, COMMON HAND TOOLS, SOLDERING KIT

REFERENCES:

T.O. 31R5-2FRC-122
T.O. 31R5-2FRC-191
T.O. 31R5-2G-342
T.O. 31R5-2G-343
T.O. 31R5-2G-344
T.O. 31R5-2FRC-102
T.O. 31R5-2FRC-103
T.O. 31R5-2FRC-104
T.O. 35E9-94-2

CONDITIONS CUES:

COND: CAN BE TIME CRITICAL, IN SHOP
CUE: RESULT OF TROUBLESHOOTING TO MODULE LEVEL

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
3U4X0 I 0230 4.07 60.0 54.0 49.0 24.0 4.16 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A TRACE CIRCUIT DIAGRAMS
- A CHECK WAVEFORMS
- A CHECK VOLTAGE LEVEL
- A CHECK VOLTAGE STABILITY
- A CHECK RESISTANCE AT SUSPECTED FAULTY COMPONENT
- A REMOVE AND REPLACE FAULTY COMPONENT

OSR JOB INVENTORY TASK STATEMENTS:

0 19230 A REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING
METHODS

TASK #: 00310

ALIGN AN/FRC-96 RADIO SET GROUP MODULATOR

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 2

THOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NOT USE

TNG REFERENCE(S): T.O. 31R5-2G-342

TTT: 5

SME OPINION: 5

EQUIPMENT:

AC VOLTMETER, SPECTRUM ANALYZER, AUDIO TONE GENERATOR, COMMON
HANDTOOLS

REFERENCES:

T.O. 31R5-2G-342

CONDITIONS CUES:

COND: CAN BE TIME CRITICAL, IN SHOP

CUE: RESULT OF TROUBLESHOOTING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0521 3.76 26.0 26.0 25.0 37.0 5.32 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSERT KNOWN FREQUENCY LEVEL
- A ADJUST VOLTAGE LEVEL
- A CHECK PILOT TONE LEVEL
- A INSERT NEW FREQUENCY LEVEL
- A CHECK FOR CARRIER DROPOUT

OSR JOB INVENTORY TASK STATEMENTS:

0 L0521 A ADJUST TRANSMITTER FREQUENCY MODULATION (FM) MODULA-
TOR COMPONENTS

TASK #: 00320

INSPECT AN/FRC-97 RADIO SET GROUP

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: 1, 7, 14, 28, 56, 84, 168

OJT TRAINABLE: YES, NO, TEST EQUIPMENT

QTP ADEQUATE: NOT USED

TNG REFERENCE(S): T.O. 31R5-2FRC-126WC-1, T.O. 31R5-2FRC-196WC-1,
T.O. 31R5-2G-346WC-1, T.O. 31R5-2FRC-106WC-1,
AND T.O. 31R5-2FRC97-6WC-1

TTT: 5

SME OPINION: 5

EQUIPMENT:

AC VOLTMETER, SPECTRUM ANALYZER, SWEEP GENERATOR, DIGITAL
MULTIMETER, FREQUENCY SELECTIVE VOLTMETER, SIGNAL GENERATOR
(RF AND AUDIO), NOISE GENERATOR/RECEIVER, OSCILLOSCOPE, POWER
METER, FREQUENCY COUNTER, ATTENUATORS, DIODE DETECTOR, HP-85
COMPUTER, CLEANING SUPPLIES, COMMON HAND TOOLS, ANALOG MULTIMETER

REFERENCES:

T.O. 31R5-2FRC-126WC-1

T.O. 31R5-2FRC-196WC-1

T.O. 31R5-2G-346WC-1

T.O. 31R5-2FRC-106WC-1

T.O. 31R5-2FRC97-6WC-1

CONDITIONS CUES:

COND: EQUIPMENT DOWN FOR SOME PORTIONS OF PMI, OUTAGE REQUIRES
COORDINATION

CUE: PMI

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X0	K	0420	4.52	50.0	39.0	35.0	17.0	4.84
304X0	G	0178	3.61	18.0	15.0	14.0	13.0	5.64
304X0	L	0565	3.80	30.0	27.0	24.0	13.0	4.75
								11.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CLEAN EQUIPMENT EXTERIOR AND INTERIOR TO INCLUDE AIR FILTERS
- A LUBRICATE FITTINGS AND BEARINGS
- A CHECK METER READINGS
- A CHECK VOLTAGE LEVELS
- A CHECK VOLTAGE STABILITY
- A CHECK RF BANDPASS
- A CHECK GAIN LEVELS
- A CHECK FREQUENCY LEVELS
- A CHECK POWER OUTPUT LEVELS
- A CHECK NOISE LEVELS
- A CHECK FREQUENCY QUIETING CURVES
- A CALIBRATE METERS
- A CHECK NOISE/POWER RATIOS
- A CHECK BASIC/INTRINSIC NOISE RATIO
- A CHECK FAULT ALARM OPERATION
- A CHECK WAVEGUIDE PRESSURIZATION
- A CHECK HEAT EXCHANGER OPERATION
- A CHECK DEHYDRATOR OPERATION

OSR JOB INVENTORY TASK STATEMENTS:

- 0 G0178 A PERFORM NOISE POWER RATIO (NPR) TESTS
- 0 K0420 A PERFORM PMI ON FM RECEIVERS
- 0 G0178 A PERFORM NOISE POWER RATIO (NPR) TESTS
- 0 K0420 A PERFORM PMI ON FM RECEIVERS
- 0 L0565 A PERFORM PMI ON FM SHF TRANSMITTERS

TASK #: 00330
TROUBLESHOOT AN/FRC-97 RADIO SET GROUP POWER AMPLIFICATION SYSTEM
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: DAILY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NOT USED
TNG REFERENCE(S): T.O. 31R5-2FRC97-2, T.O. 31R5-2FRC97-3,
AND T.O. 31R5-2FRC97-4
TTT: 5
SME OPINION: 5
EQUIPMENT:
AC VOLTmeter, SPECTRUM ANALYZER, DIGITAL MULTIMETER, HAND TOOLS,
SOLDERING KIT, ANALOG MULTIMETER
REFERENCES:
T.O. 31R5-2FRC97-2
T.O. 31R5-2FRC97-3
T.O. 31R5-2FRC97-4
CONDITIONS CUES:
COND: CAN BE TIME CRITICAL, IN SHOP
CUE: FAULT ALARM, USER COMPLAINT, PMI CHECK OUT OF
SPECIFICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0558 3.43 13.0 14.0 16.0 13.0 6.27 11.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK FAULT ALARMS
A CHECK METER READINGS
A CHECK VOLTAGE LEVELS AT TEST POINTS
K ISOLATE FAULT FROM EQUIPMENT SUBASSEMBLIES TO INDIVIDUAL COMPONENTS THROUGH CIRCUIT TRACING AND VOLTAGE TESTS
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, OR PARTS
OSR JOB INVENTORY TASK STATEMENTS:
C L0558 K ISOLATE MALFUNCTIONS IN SHF POWER AMPLIFIERS

TASK #: 00340
TROUBLESHOOT AN/FRC-97 RADIO SET GROUP EXCITER/RECEIVER SECTION TO MODULE LEVEL
L OR MECHANICAL COMPONENT LEVEL
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO, SPECIALIZED TEST EQUIPMENT
QTP ADEQUATE: NOT USED
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
EQUIPMENT:
WIDEBAND AC VOLTmeter, SPECTRUM ANALYZER, DIGITAL MULTIMETER,
FREQUENCY SELECTIVE VOLTmeter, SIGNAL GENERATOR (RF AND AUDIO),
NOISE GENERATOR/RECEIVER, OSCILLOSCOPE, POWER METER, FREQUENCY COUNTER, ATTENUATORS, DIODE DETECTOR, HP-85 COMPUTER, PYROMETER,
RF MILLIVOLTMETER, COMMON HAND TOOLS, SWEEP GENERATOR, SOLDERING KIT, ANALOG MULTIMETER
REFERENCES:
T.O. 31R5-2FRC-122
T.O. 31R5-2FRC-191
T.O. 31R5-2G-342
T.O. 31R5-2G-343
T.O. 31R5-2G-344
T.O. 31R5-2FRC-102
T.O. 31R5-2FRC-103
T.O. 31R5-2FRC-104
CONDITIONS CUES:
COND: CAN BE TIME CRITICAL, IN SHOP
CUE: FAULT ALARM, USER COMPLAINT, PMI CHECK OUT OF SPECIFICATIONS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0390 3.74 16.0 16.0 19.0 15.0 6.24 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK FAULT ALARMS
- A SWITCH TRAFFIC BETWEEN REDUNDANT COMPONENTS TO ISOLATE FAULTY SUBASSEMBLY
- K ISOLATE FAULTY MODULE BY CHECKING FREQUENCY, VOLTAGE, AND DB LEVELS
- K ISOLATE FAULTY MECHANICAL COMPONENTS
- A REMOVE/REPLACE MODULES, COMPONENTS, OR PARTS
- K PERFORM LINEAR TO LOGARITHMIC CONVERSIONS

OSR JOB INVENTORY TASK STATEMENTS:

- 0 K0390 K ISOLATE MALFUNCTIONS IN SOLID-STATE FM RECEIVERS

TASK #: 00350

REPAIR AH/FRC-97 RADIO SET GROUP EXCITER/RECEIVER SECTION

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT

QTP ADEQUATE: NOT USED

TNG REFERENCE(S): SEE REFERENCES

TTT: 5

SME OPINION: 5

EQUIPMENT:

DIGITAL MULTIMETER, SIGNAL GENERATOR (AUDIO AND RF),
OSCILLOSCOPE, FREQUENCY COUNTER, ATTENUATORS, DIODE DETECTOR
PYROMETER, RF MILLIVOLTMETER, COMMON HAND TOOLS, ANALOG
MUTIMETER.

REFERENCES:

T.O. 31R5-2FRC-122

T.O. 31R5-2FRC-191

T.O. 31R5-2G-342

T.O. 31R5-2G-343

T.O. 31R5-2G-344

T.O. 31R5-2FRC-102

T.O. 31R5-2FRC-103

T.O. 31R5-2FRC-104

CONDITIONS CUES:

COND: CAN BE TIME CRITICAL, IN SHOP

CUE: RESULT OF TROUBLESHOOTING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0374 3.98 29.0 29.0 30.0 18.0 5.97 11.0
304X0 K 0477 2.50 8.0 10.0 12.0 12.0 5.69 7.0
304X0 I 0229 2.78 44.0 37.0 34.0 20.0 2.85 10.0

ACTIVITIES SKILL KNOWLEDGE:

- A ALIGN CIRCUIT CARDS

- A REMOVE AND REPLACE MECHANICAL COMPONENTS

OSR JOB INVENTORY TASK STATEMENTS:

- 0 I0229 A REMOVE ELECTROMECHANICAL COMPONENTS USING METHODS

OTHER THAN SOLDERING

- 0 K0374 A ALIGN FM RECEIVERS

- 0 K0477 A REPAIR MALFUNCTIONS IN SOLID-STATE FM RECEIVERS

- 0 I0229 A REMOVE ELECTROMECHANICAL COMPONENTS USING METHODS

OTHER THAN SOLDERING

TASK #: 00360
TROUBLESHOOT AND REPAIR AN/FRC-97 RADIO SET GROUP EXCITER/RECEIVER SECTION MODULES

DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: TWO MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NOT USED
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5

EQUIPMENT:
DIGITAL MULTIMETER, SIGNAL GENERATOR (AUDIO AND RF),
OSCILLOSCOPE, FREQUENCY COUNTER, ATTENUATORS, DIODE DETECTOR,
PYROMETER, RF MILLIVOLTMETER, COMMON HAND TOOLS, ANALOG
MULTIMETER, SOLDERING KIT

REFERENCES:
T.O. 31R5-2FRC-122
T.O. 31R5-2FRC-191
T.O. 31R5-2G-342
T.O. 31R5-2G-343
T.O. 31R5-2G-344
T.O. 31R5-2FRC-102
T.O. 31R5-2FRC-103
T.O. 31R5-2FRC-104

CONDITIONS CUES:
COND: CAN BE TIME CRITICAL, IN SHOP
CUE: RESULT OF TROUBLESHOOTING TO MODULE LEVEL

JOB STANDARDS:
IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	IENL	5SKL	7SKL	TD	ATI
304X0	K 0406	.67	7.0	6.0	5.0	6.0	6.06	2.0
304X0	K 0390	3.74	16.0	16.0	19.0	15.0	6.24	11.0
304X0	K 0477	2.50	8.0	10.0	12.0	12.0	5.69	7.0

ACTIVITIES SKILL KNOWLEDGE:
K TRACE CIRCUIT DIAGRAMS
A CHECK WAVEFORMS
A CHECK VOLTAGE LEVEL
A CHECK VOLTAGE STABILITY
A CHECK RESISTANCE AT SUSPECTED FAULTY COMPONENT
A REMOVE AND REPLACE FAULTY COMPONENT

OSR JOB INVENTORY TASK STATEMENTS:
0 K0390 K ISOLATE MALFUNCTIONS IN SOLID-STATE FM RECEIVERS
0 K0406 K ISOLATE MALFUNCTIONS IN TUBE TYPE FM RECEIVERS
0 K0477 A REPAIR MALFUNCTIONS IN SOLID-STATE FM RECEIVERS

TASK #: 00370
ALIGN AN/FRC-97 RADIO SET GROUP MODULATOR

DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NOT USED
TNG REFERENCE(S): T.O. 31R5-2G-342
TTT: 5
SME OPINION: 5

EQUIPMENT:
AC VOLTMETER, SPECTRUM ANALYZER, AUDIO TONE GENERATOR, COMMON
HANDTOOLS, SIGNAL GENERATOR

REFERENCES:
T.O. 31R5-2G-342

CONDITIONS CUES:
COND: CAN BE TIME CRITICAL, IN SHOP
CUE: RESULT OF TROUBLESHOOTING

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0521 3.70 26.0 26.0 25.0 17.0 5.32 11.0
304X0 L 0531 3.63 17.0 18.0 20.0 16.0 6.15 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSERT KNOWN FREQUENCY LEVEL
- A ADJUST VOLTAGE LEVEL
- A CHECK PILOT TONE LEVEL
- A INSERT NEW FREQUENCY LEVEL
- A CHECK FOR CARRIER DROPOUT

OSR JOB INVENTORY TASK STATEMENTS:

- 0 L0521 A ADJUST TRANSMITTER FREQUENCY MODULATION (FM) MODULATOR COMPONENTS
- 0 L0531 A ALIGN FM SHF TRANSMITTERS

TASK #: 00380

INSPECT AN/FRC-127 RADIO SET

DUTY CODE: X0

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: NONE, DAMAGE, NONE

HOW OFTEN: 28, 84, 156

OJT TRAINABLE: YES, YES

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X0-30J, LWC-2140CG-31R5-4-45-6WC-1,
T.O. 31R5-4-45-6WC-1, AND T.O. 31R5-4-45-2

TTT: 5

SME OPINION: 5

EQUIPMENT:

POWER METER, FREQUENCY COUNTER, AUDIO OSCILLATOR, SELECTIVE
VOLTMETER, SIGNAL GENERATOR, CLEANING SUPPLIES

REFERENCES:

LWC-2140CG-31R5-4-45-6WC-1
T.O. 31R5-4-45-6WC-1

CONDITIONS CUES:

COND: IN SHOP, OUT OF SERVICE

CUE: PMI

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK FAULT ALARMS
- A CHECK METER READINGS
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CLEAN EXTERIOR
- A CHECK BASEBAND PILOT LEVELS
- A CHECK RECEIVE SIGNAL LEVEL AND RECEIVE QUIETING
CURVES
- A CHECK RADIO ORDER WIRE OPERATION
- A CHECK POWER SUPPLY OUTPUT VOLTAGE
- A CHECK TRANSMIT OUTPUT POWER
- A CHECK TRANSMIT OUTPUT FREQUENCY
- A CHECK FM REFERENCE CRYSTAL OSCILLATOR FREQUENCY
- A CHECK LOCAL OSCILLATOR FREQUENCY

OSR JOB INVENTORY TASK STATEMENTS:

- 0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF
INSTALLED EQUIPMENT

TASK #: 00390
TROUBLESHOOT AN/FRC-127 RADIO SET RECEIVE SIDE
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: INDEFINITE (NOT BEEN DONE YET)
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT,
MICROWAVE THEORY
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 304X0-30J, T.O. 31R5-4-45-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, SELECTIVE VOLTMETER, VOLTMETER, SPECTRUM
ANALYZER, ANALOG MULTIMETER, DIGITAL MULTIMETER, OSCILLOSCOPE,
SOLDERING KIT
REFERENCES:
T.O. 31R5-4-45-2
CONDITIONS CUES:
COND: IN SHOP, OUT OF SERVICE
CUE: USER COMPLAINT, FAULT ALARMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1024 2.78 20.0 20.0 17.0 11.0 5.53 11.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK FAULT ALARMS
A CHECK RECEIVE SIGNAL LEVEL
A CHECK LOCAL OSCILLATOR FREQUENCY
A CHECK IF AMPLIFIER OUTPUT
A CHECK LINE AMPLIFIER OUTPUT
K ISOLATE COMPONENT THROUGH AUDIO/IF/RF SIGNAL INJECTION AND CIRCUIT TRACING
A REMOVE AND REPLACE INDICATED MODULE
A REMOVE AND REPLACE INDICATED COMPONENT
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1024 K ISOLATE MALFUNCTIONS IN LINE AMPLIFIERS

TASK #: 00400
TROUBLESHOOT AN/FRC-127 RADIO SET TRANSMIT SIDE
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: INDEFINITE (NOT BEEN DONE YET)
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT,
MICROWAVE THEORY
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 304X0-30J, T.O. 31R5-4-45-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, SELECTIVE VOLTMETER, VOLTMETER, SPECTRUM
ANALYZER, ANALOG MULTIMETER, DIGITAL MULTIMETER, OSCILLOSCOPE,
SOLDERING EQUIPMENT
REFERENCES:
T O. 31R5-4-45-2
CONDITIONS CUES:
COND: IN SHOP, OUT OF SERVICE
CUE: USER COMPLAINT, FAULT ALARMS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0230 4.07 60.0 54.0 49.0 24.0 4.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK FAULT ALARMS
A CHECK TRANSMIT SIGNAL LEVEL
A CHECK TRANSMIT FREQUENCY
A CHECK LOCAL OSCILLATOR FREQUENCY
A CHECK FM EXCITER OUTPUT
A CHECK POWER MULTIPLIER OUTPUT
A CHECK WAVEGUIDE FREQUENCY AND POWER LEVEL
K ISOLATE COMPONENT THROUGH AUDIO/IF/RF SIGNAL INJECTION AND CIRCUIT TRACING
A REMOVE AND REPLACE INDICATED MODULE
A REMOVE AND REPLACE INDICATED COMPONENT
OSR JOB INVENTORY TASK STATEMENTS:
0 I0230 A REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS

TASK #: 00410
ALIGN OR ADJUST AN/FRC-127 RADIO SET
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: INDEFINITE (NOT BEEN DONE YET)
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT,
MICROWAVE THEORY
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 304X0-30J, T.O. 31R5-4-45-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
SELECTIVE VOLTMETER, HAND TOOLS, DIGITAL MULTIMETER, ANALOG
MULTIMETER
REFERENCES:
T.O. 31R5-4-45-2
CONDITIONS CUES:
COND: IN SHOP, OUT OF SERVICE
CUE: RESULT OF TROUBLESHOOTING, FAILURE OF PMI CHECK
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0984 3.00 25.0 24.0 22.0 12.0 4.28 11.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST TRANSMIT AMPLIFIER OUTPUT LEVEL
A ADJUST TRANSMIT PILOT TONE LEVEL
A ADJUST RECEIVE BASEBAND LEVEL CONTROL
A ADJUST RECEIVE LINE AMPLIFIER OUTPUT LEVEL
A ADJUST LOCAL OSCILLATOR FREQUENCY
A ADJUST RESONANT CAVITY OUTPUT FREQUENCY
A ADJUST TRANSMIT PILOT DETECTOR THRESHOLD
A ADJUST TRANSMIT ALARM INTERFACE THRESHOLD
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0984 A ADJUST LINE AMPLIFIER COMPONENTS

TASK #: 00420
INSPECT AN/FRC-162(V) MICROWAVE RADIO
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR (DEGRADED COMMUNICATIONS), NONE, NONE
HOW OFTEN: 64 AND 168 DAY AND SPECIAL INSPECTIONS
OJT TRAINABLE: YES
QTP ADEQUATE: HASN'T USED IT
TNG REFERENCE(S): QTP 304X0-30VB
TTT: 5
SME OPINION: 3

EQUIPMENT:

(HP 432A) POWER METER, THERMISTOR MOUNT (HP 478A), MICROWAVE FREQUENCY COUNTER, FREQUENCY COUNTER (SYSTRON DONNER 6316A), FREQUENCY SELECTIVE VOLTMETER, DIGITAL VOLTMETER, MICROWAVE SIGNAL GENERATOR AND AN/URM-44A, TEST OSCILLATOR (HP 651B), DELAY AND LINEARITY TEST SIGNAL GENERATOR (COLLINS 70E1-MW), DELAY AND TEST LINEARITY SIGNAL ANALYZER (COLLINS 70E2-MW), 70 MHZ DELAY AND LINEARITY AND TEST RECEIVER (COLLINS 70G1-MW), AC VOLTMETER (HP 400E), OSCILLOSCOPE, AN/USM-281C, WHITE NOISE TEST SET (MARCONI (0A2090A)), CONNECTORS, TEST CABLES, TEST PROD WITH INSULATED LEAD, ADAPTORS, 75 OHM TERMINATION, CLIP-ON MILLIAMMETER (HP 428B), DISTORTION ANALYZER (HP 333A), DEVIATION CALIBRATOR 70 D2-2 MW, DATA TRANSMISSION TEST SET MODEL 604M, HP 85B COMPUTER, TOOL KIT, ANALOG MULTIMETER, SPECTRUM ANALYZER

REFERENCES:

T.O. 31R5-2FRC-162-1
T.O. 31R5-2FRC162-6WC-1

CONDITIONS CUES:

COND:

CUE:

JCB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1081 2.43 17.0 15.0 10.0 5.0 4.21 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A CLEAN EQUIPMENT
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A VERIFY SWITCH POSITIONS
- A CHECK METER INDICATIONS
- A TEST ALARM LAMP OPERATION
- A MEASURE TRANSMIT POWER AND FREQUENCY
- A MEASURE TRANSMIT AND RECEIVE PILOT LEVELS
- A MEASURE TRANSMIT PILOT DEVIATION LEVEL
- A MEASURE AUTOMATIC FREQUENCY CONTROL (AFC) REFERENCE UNIT FREQUENCY
- A MEASURE RECEIVE LOCAL OSCILLATOR FREQUENCY
- A VERIFY AUTOMATIC GAIN CONTROL (AGC) VOLTAGES VERSUS AGC METER READINGS
- A MEASURE AUDIO CHANNEL TRANSMIT AND RECEIVE LEVEL
- A TEST TRANSMITTER LINEARITY
- A MEASURE RECEIVE SIGNAL FOR DELAY EQUALIZATION
- A MEASURE BASEBAND FREQUENCY RESPONSE
- A MEASURE SYSTEM NOISE POWER RATIO (NPDR) AND RESIDUAL NOISE
- K APPLY LOGARITHMIC AND EXPONENTIAL NOTATION

OSR JOB INVENTORY TASK STATEMENTS:

0 Q1081 A PERFORM PMI ON AUTOMATIC FAULT SENSING AND SWITCHING NETWORKS

TASK #: 00430

ALIGN AND ADJUST FRC-162(V) MICROWAVE RADIO

DUTY CODE: X0

TASK STATUS: 3R-K

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, NONE, NONE

HOW OFTEN: MONTHLY

OJT TRAINABLE: YES

QTP ADEQUATE: HASN'T USED IT YET

TNG REFERENCE(S): QTP 304X0-30VB

TTT: 5

SME OPINION: 5

EQUIPMENT:

(HP 432A) POWER METER, THERMISTOR MOUNT (HP 478A), MICROWAVE FREQUENCY COUNTER, FREQUENCY COUNTER (SYSTRON DONNER 6316A), FREQUENCY SELECTIVE VOLTMETER, DIGITAL VOLTMETER, MICROWAVE SIGNAL GENERATOR AND AN/URM-44A, TEST OSCILLATOR (HP 651B), DELAY AND LINEARITY TEST SIGNAL GENERATOR (COLLINS 70E1-MW), DELAY AND TEST LINEARITY SIGNAL ANALYZER (COLLINS 70E2-MW), 70 MHZ DELAY AND LINEARITY AND TEST RECEIVER (COLLINS 70G1-MW), AC VOLTMETER (HP 400E), OSCILLOSCOPE, AN/USM-281C, WHITE NOISE TEST SET (MARCONI (0A2090A)), CONNECTORS, TEST CABLES, TEST PROD WITH INSULATED LEAD, ADAPTORS, 75 OHM TERMINATION, CLIP-ON MILLIAMMETER (HP 428B), DISTORTION ANALYZER (HP 333A), DEVIATION CALIBRATOR 70 D2-2 MW, DATA TRANSMISSION TEST SET MODEL 604M, HP 85B COMPUTER, ANALOG MULTIMETER, TOOL KIT, SPECTRUM ANALYZER

REFERENCES:

T.O. 31R5-2FRC162-1
T.O. 31R5-2FRC162-6WC-1

CONDITIONS CUES:

COND: EQUIPMENT DOWN; BACKUP EQUIPMENT ON THE AIR
CUE: INSPECTION RESULTS OR OTHER OUT OF TOLERANCE INDICATIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0229 2.78 44.0 37.0 34.0 20.0 2.85 10.0

ACTIVITIES SKILL KNOWLEDGE:

- A ADJUST ATTENUATOR UNIT
- A ADJUST AFC REFERENCE UNIT
- A ADJUST AFC DISCRIMINATOR ZERO AND DEVIATION SENSITIVITY
- A ADJUST RF POWER OUTPUT
- A ADJUST TRANSMITTER OR FREQUENCY
- A ADJUST TRANSMITTER LINEARITY
- A CALIBRATE TRANSMIT DEVIATION AND ADJUST MODULATION AMPLIFIER
- A ADJUST TWT PERFORMANCE MONITOR
- A ADJUST TWT OUTPUT POWER
- A ADJUST TWT PERFORMANCE MONITOR
- A ADJUST TWT OUTPUT POWER
- A ADJUST LOCAL OSCILLATOR FREQUENCY
- A ADJUST LOCAL OSC DRIVE TO MIXER
- A ADJUST IF AMPLIFIER DEVIATION SENSITIVITY
- A ADJUST IF AMPLIFIER DISCRIMINATOR
- A CALIBRATE AGC VOLTAGE VERSUS RSL
- A ADJUST IF AMPLIFIER DISCRIMINATOR
- A CALIBRATE AGC VOLTAGE VERSUS RSL
- A ADJUST IF AMPLIFIER SQUELCH
- A CHECK/ADJUST SENSOR LOGIC SWITCH, SWITCH CONTROL, AND SWITCHOVER CONTROL UNITS
- A ADJUST FM MODULATOR, FM DEMODULATOR, AND AUDIO CHANNEL LEVELS
- A CALIBRATE DEVIATION TEST MONITOR
- A ADJUST DELAY EQUALIZATION

A MEASURE BASEBAND ENVELOPE DELAY

A MEASURE BIT ERROR RATE

OSR JOB INVENTORY TASK STATEMENTS:

0 I0229 A REMOVE ELECTROMECHANICAL COMPONENTS USING METHODS OTHER THAN SOLDERING

TASK #: 00440

TROUBLESHOOT AN/FRC-162(V) AND COORDINATE WITH DISTANT END

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: MINOR, NONE, NONE

HOW OFTEN: MONTHLY

OJT TRAINABLE: YES

QTP ADEQUATE: NOT USED YET

TNG REFERENCE(S): QTP 304X0-30VB

TTT: 3 OR 5

SME OPINION: 3 OR 5

EQUIPMENT:

(HP 432A) POWER METER, THERMISTOR MOUNT (HP 478A), MICROWAVE FREQUENCY COUNTER, (SYSTRON DONNER 6316A), FREQUENCY SELECTIVE VOLTMETER, DIGITAL VOLTMETER, MICROWAVE SIGNAL GENERATOR AND AN/URM-44A, TEST OSCILLATOR (HP 651B) DELAY AND LINEARITY TEST SIGNAL GENERATOR (COLLINS 70E1-MW), DELAY AND TEST LINEARITY SIGNAL ANALYZER (COLLINS 70E2-MW), 70 MHZ DELAY AND LINEARITY AND TEST RECEIVER (COLLINS 70G1-MW), AC VOLTMETER (HP 400E), OSCILLOSCOPE, AN/USM-28IC, WHITE NOISE TEST SET (MARCONI 0A2090A), CONNECTORS, TEST CABLES, TEST PROD WITH INSULATED LEAD, ADAPTORS, 75 OHM TERMINATION, CLIP-ON MILLIAMMETER (HP 428B), DISTORTION ANALYZER (HP 333A), DEVIATION CALIBRATOR 70 D2-2 MHZ, DATA TRANSMISSION TEST SET MODEL 604M, HP 85B COMPUTER, TOOL KIT, SPECTRUM ANALYZER, SOLDERING KIT, SELECTIVE LEVEL METER

REFERENCES:

T.O. 31R5-2FRC162-1

T.O. 31R5-2FRC

CONDITIONS CUES:

COND: EQUIPMENT COULD BE UP OR DOWN; BACKUP WOULD PROBABLY BE
ON THE AIR

CUE: FEEDBACK FROM DISTANT END OR RADIO ALARM, SPECIAL CHECKS
DONE EVERY TWELVE MONTHS OR WHEN SIGNAL IS DEGRADED
AS DETERMINED FROM PMI, OR DISTANT END FEEDBACK

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 J 0290 2.74 8.0 7.0 9.0 11.0 6.31 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK VISUAL ALARMS
- A CHECK THAT FREQUENCIES AT VARIOUS POINTS ARE CORRECT
- A CHECK RADIO LEVELS
- A INSERT TEST TONES AND CHECK VARIOUS POINTS IN RADIO
- A CHECK POWER SUPPLY
- A COORDINATE WITH DISTANT END TO DETERMINE WHAT THEY
ARE SENDING AND RECEIVING
- K ISOLATE FAULTY TRANSMITTER PARTS
- K ISOLATE FAULTY RECEIVER PARTS
- K ISOLATE FAULTY ANCILLARY EQUIPMENT PARTS
- A ADJUST DELAY EQUALIZATION
- A MEASURE BASEBAND ENVELOPE DELAY
- A MEASURE BIT ERROR RATE
- A MEASURE RECEIVE SIGNAL FOR DELAY EQUALIZATION
- A MEASURE BASEBAND FREQUENCY RESPONSE
- A MEASURE SYSTEM NPRS AND BINRS

OSR JOB INVENTORY TASK STATEMENTS:

0 J0290 K ISOLATE MALFUNCTIONS IN ANTENNA TRANSMISSION LINES OR
RELATED COMPONENTS, SUCH AS FILTERS

TASK #: 00450

INSPECT AN/FRC-171(V)10 DIGITAL RADIO SET

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: MINOR TO SERIOUS, DAMAGE, INJURY

HOW OFTEN: 84 DAYS

OJT TRAINABLE: YES

QTP ADEQUATE: NONE, LOCAL TASK QUALIFICATION PACKAGES ARE
AVAILABLE (WIDEBAND TRAINING PLAN)

TNG REFERENCE(S): LOCALLY DEVELOPED WIDEBAND TRAINING PLAN

TTT: 3

SME OPINION: 3 (MOST INSPECTIONS)

EQUIPMENT:

VOLTMETER, FREQUENCY COUNTER, POWER METER, BIT ERROR RATE (BER)
TEST SET, SPECTRUM ANALYZER, BUILT IN DISPLAY PANEL METER,
OSCILLOSCOPE, ANALOG MULTIMETER, DIGITAL MULTIMETER, TOOL KIT

REFERENCES:

T.O. 31R5-2FRC-181

T.O. 31R5-2FRC-186WC-1

CONDITIONS CUES:

COND: ORGANIZATIONAL MAINTENANCE; EQUIPMENT UP OR DOWN

CUE: PMI

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X0 L 0516 3.13 21.0 22.0 20.0 15.0 4.42 11.0
 304X0 K 0418 4.04 18.0 20.0 17.0 10.0 4.22 11.0
 304X0 G 0155 4.11 47.0 31.0 25.0 19.0 3.67 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK DISPLAY PANEL ASSEMBLY 511800 LAMPS
- A CHECK TIMING STATUS LAMPS
- A CHECK POWER SUPPLY VOLTAGES ON DISPLAY PANEL
- A CHECK RF READINGS ON DISPLAY PANEL
- A VERIFY CATHODE CURRENTS ARE INDICATING A NON-DEGRADED TRAVELING WAVE TUBE (TWT)
- A CHECK TRANSMITTER AND RECEIVER STABLE LOCAL OSCILLATOR (STALG) FREQUENCY
- A CLEAN FANS AND ENTIRE RADIO
- A CHECK METER READINGS
- A PERFORM LOOPBACK TEST
- A TEST MODEM
- A TEST MULTIPLEXER CARD
- A TEST DEMULTIPLEXER CARD
- A TEST TIMING MODULE
- A TEST SWITCHOVER LOGIC MODULE
- A CHECK OF RECEIVE ALARM LAMPS
- A CHECK TWT POWER SUPPLY VOLTAGE AND CURRENT
- A ADJUST POWER ALARM THRESHOLD AND TRANSMITTER OUTPUT
- A CHECK HELIX MONITOR
- K INTERPRET AN/FRC-171 BLOCK DIAGRAM

OSR JOB INVENTORY TASK STATEMENTS:

- 0 G0155 A OBSERVE STATUS DISPLAY PANELS TO DETERMINE EQUIPMENT OPERATION (SIGNAL QUALITY)
- 0 K0418 A PERFORM PMI ON DIGITAL RECEIVERS
- 0 L0516 A ADJUST POWER MONITORS

TASK #: 00460
 TROUBLESHOOT AN/FRC-171(V)10 DIGITAL RADIO SET
 DUTY CODE: XO
 TASK STATUS: 3R-KP
 TIMES ANALYZED: 3

TNOTES:

- CONSEQUENCES: SERIOUS, NONE, INJURY
- HOW OFTEN: SEMIANNNUALLY
- OJT TRAINABLE: YES
- QTP ADEQUATE: NONE
- TNG REFERENCE(S): T.O. 31R5-2FRC-181
- TTT: 5
- SME OPINION: 3

EQUIPMENT:

- VOLT OHM METER, FREQUENCY COUNTER, POWER METER, BIT ERROR RATE (BER) TEST SET, SPECTRUM ANALYZER, TWT POWER SUPPLY TESTER, OSCILLOSCOPE, SOLDERING KIT, TOOL KIT, ANALOG MULTIMETER, DIGITAL MULTIMETER

REFERENCES:

- T.O. 31R5-2FRC-181

CONDITIONS CUES:

- COND: ORGANIZATIONAL MAINTENANCE; BACK UP RADIO ON-LINE
- CUE: INSPECTION RESULTS; EQUIPMENT FAILURE

JOB STANDARDS:

- IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X0 L 0535 3.83 6.0 12.0 13.0 11.0 6.56 11.0
 304X0 L 0573 2.09 7.0 10.0 11.0 9.0 3.89 7.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY LINE REPLACEABLE UNITS (LRU), MODULES, AND COMPONENTS
- A REMOVE AND REPLACE LINE REPLACEABLE UNITS (LRU), MODULES, AND COMPONENTS
- K INTERPRET AN/FRC-171 BLOCK DIAGRAM

OSR JOB INVENTORY TASK STATEMENTS:

- 0 L0535 K ISOLATE MALFUNCTIONS IN DIGITAL TRANSMITTERS
- 0 L0573 A REMOVE DIGITAL TRANSMITTER MODULAR CIRCUIT CARDS

TASK #: 00470
ALIGN OR ADJUST AN/FRC-171(V)10 DIGITAL RADIO SET
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 84 DAYS
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LOCALLY DEVELOPED WIDEBAND TRAINING PLAN
TTT: 5
SME OPINION: 3
EQUIPMENT:
VOLTMETER, FREQUENCY COUNTER, POWER METER, BIT ERROR RATE (BER)
TEST SET, SPECTRUM ANALYZER, COMMON HANDTOOLS, OSCILLOSCOPE
ANALOG MULTIMETER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R5-2FRC-181
T.O. 31R5-2FRC-186WC-1
CONDITIONS CUES:
COND: ORGANIZATIONAL MAINTENANCE; EQUIPMENT UP OR DOWN
CUE: INSPECTION RESULTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0518 2.85 7.0 13.0 15.0 11.0 5.54 11.0
304X0 O 0786 2.98 9.0 8.0 7.0 4.0 5.62 11.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN TWT POWER SUPPLY
A ALIGN POWER ALARM THRESHOLD AND TRANSMITTER POWER
A ALIGN HELIX MONITOR
A ALIGN MONITOR BOARD FOR PROPER METER READINGS
A ALIGN FREQUENCY SOURCES
A CONFIGURE MODEM
A CONFIGURE MULTIPLEXER
A CONFIGURE DEMULTIPLEXER
A CONFIGURE TIMING MODULE
A CONFIGURE SWITCHOVER MODULE
OSR JOB INVENTORY TASK STATEMENTS:
0 L0518 A ADJUST SUPER HIGH FREQUENCY (SHF) POWER AMPLIFIER
COMPONENTS
0 00786 A ADJUST DIGITAL MODEMS

TASK #: 00480
INSPECT THE AN/FTA-20 TELEPHONE TERMINAL
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 28, 56, 84
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W2-4-116-36WC-1, T.O. 31W2-4-116-31
TTT: 3
SME OPINION: 3
EQUIPMENT:
VOICE FREQUENCY OSCILLATOR, RMS VOLTMETER, FREQUENCY COUNTER
MATCHING TRANSFORMER, DIGITAL MULTIMETER, OSCILLOSCOPE,
POWER SUPPLY, CAPACITOR SUBSTITUTION BOX
REFERENCES:
T.O. 31W2-4-116-36WC-1
T.O. 31W2-4-116-31
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI OR EQUIPMENT FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN AND LUBRICATE EQUIPMENT
A PERFORM CORROSION CONTROL PROCEDURES
A PERFORM EQUIPMENT OPERATIONAL CHECKS
OSR JOB INVENTORY TASK STATEMENTS:
0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF
INSTALLED EQUIPMENT

TASK #: 00490
ALIGN AND ADJUST THE AN/FTA-20 TELEPHONE TERMINAL
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W2-4-116-36WC-1 AND T.O. 31W2-4-116-31
TTT: 3
SME OPINION: 3
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, FREQUENCY COUNTER, HAND SET,
OSCILLOSCOPE
REFERENCES:
T.O. 31W2-4-116-36WC-1
T.O. 31W2-4-116-31
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0962 3.07 31.0 29.0 26.0 16.0 3.77 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM TRANSMIT LEVEL AND SENSITIVITY CHECK
A PERFORM TRANSMIT SIGNAL FREQUENCY CHECK
A PERFORM RECEIVE LEVEL CHECK
A PERFORM RECEIVE SIGNAL DETECTOR AND SENSITIVITY CHECK
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0962 A ADJUST AUDIO AMPLIFIER COMPONENTS

TASK #: 00500
TROUBLESHOOT THE AN/FTA-20 TELEPHONE TERMINAL RECEIVE SECTION
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W2-4-116-36WC-1 AND T.O. 31W2-4-116-31
TTT: 3
SME OPINION: 5
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, HAND SET, DIGITAL
MULTIMETER, OSCILLOSCOPE, CAPACITOR SUBSTITUTION BOX,
FREQUENCY COUNTER, CIRCUIT TESTER
REFERENCES:
T.O. 31W2-4-116-36WC-1
T.O. 31W2-4-116-31
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1035 2.93 13.0 16.0 15.0 11.0 5.49 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM EQUIPMENT OPERATION CHECKS
A ALIGN OR ADJUST COMPONENTS
K ISOLATE FAULTY COMPONENT
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1035 K ISOLATE MALFUNCTIONS IN SOLID-STATE AUDIO AMPLIFIERS

TASK #: 00510
TROUBLESHOOT THE AN/FTA-20 TELEPHONE TERMINAL TRANSMIT SECTION
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W2-4-116-36WC-1 AND T.O. 31W2-4-116-31
TTT: 3
SME OPINION: 5
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, HAND SET, DIGITAL
MULTIMETER, OSCILLOSCOPE, 20 HZ RING GENERATOR, CAPACITOR
SUBSTITUTION BOX, FREQUENCY COUNTER
REFERENCES:
T.O. 31W2-4-116-36WC-1
T.O. 31W2-4-116-31
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1045 3.26 8.0 13.0 14.0 10.0 5.89 11.0
304X0 K 0388 3.61 22.0 22.0 24.0 16.0 5.97 11.0
304X0 H 0638 3.57 14.0 15.0 14.0 9.0 5.93 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM EQUIPMENT OPERATION CHECKS
A ALIGN OR ADJUST COMPONENTS
K ISOLATE FAULTY COMPONENT
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1045 K ISOLATE MALFUNCTIONS IN SOLID-STATE AFC
0 K0388 K ISOLATE MALFUNCTIONS IN SOLID-STATE AGC CIRCUITS
0 H0638 K ISOLATE MALFUNCTIONS IN SOLID-STATE IN-BAND SIGNALING
AND CONTROL CIRCUITS
0 K0388 K ISOLATE MALFUNCTIONS IN SOLID-STATE AGC CIRCUITS
0 H0638 K ISOLATE MALFUNCTIONS IN SOLID-STATE IN-BAND SIGNALING
AND CONTROL CIRCUITS
0 Q1045 K ISOLATE MALFUNCTIONS IN SOLID-STATE AFC

TASK #: 00520
REMOVE, REPAIR, AND REPLACE AN/FTA-20 TELEPHONE TERMINAL CIRCUIT CARDS
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, REPAIR REQUIRES EXTENSIVE KNOWLEDGE
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W2-4-116-36WC-1 AND T.O. 31W2-4-116-31
TTT: 3
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE, CIRCUIT TESTER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31W2-4-116-36WC-1
T.O. 31W2-4-116-31
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: ISOLATED DEFECT
JOB STANDARDS:
IAW REFERENCES
DSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0236 3.04 40.0 40.0 40.0 26.0 3.60 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARD COMPONENTS
A REMOV. AND REPLACE CIRCUIT BOARD COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 I0236 A REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER
THAN SOLDERING

TASK #: 00530
INSPECT THE AN/FTA-28 TELEPHONE TERMINAL
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 28
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 3
EQUIPMENT:
VOICE FREQUENCY OSCILLATOR, RMS VOLTMETER, FREQUENCY COUNTER,
MATCHING TRANSFORMER, 20 HZ RING GENERATOR, OSCILLOSCOPE,
DIGITAL MULTIMETER
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI OR EQUIPMENT FAILURE
JOB STANDARDS:
IAW REFERENCES
USR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATIONAL PERFORMANCE TEST
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN INTERIOR AND EXTERIOR OF EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF
INSTALLED EQUIPMENT

TASK #: 00540
TROUBLESHOOT THE AN/FTA-28 TELEPHONE TERMINAL TRANSMIT SECTION
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 5
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, HAND SET, DIGITAL
MULTIMETER, OSCILLOSCOPE, 20 HZ RING GENERATOR, CAPACITOR
SUBSTITUTION BOX, FREQUENCY COUNTER
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1035 2.93 13.0 16.0 15.0 11.0 5.49 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATION CHECKS
A ALIGN OR ADJUST COMPONENTS
K ISOLATE FAULTY MODULES OR COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1035 K ISOLATE MALFUNCTIONS IN SOLID-STATE AUDIO AMPLIFIERS

TASK #: 00550
REMOVE, REPAIR, AND REPLACE AN/FTA-28 TELEPHONE TERMINAL CIRCUIT CARDS
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, REPAIR REQUIRES EXTENSIVE KNOWLEDGE
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE, CIRCUIT TESTER, DIGITAL MULTIMETER, HAND TOOLS
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: ISOLATED DEFECT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOR 1ENL 5SKL 7SKL TD ATI
304X0 I 0236 3.04 40.0 40.0 40.0 26.0 3.60 12.0
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE/REPLACE CIRCUIT BOARD COMPONENTS AND MINOR
PARTS
A REMOVE OR REPLACE OSCILLATORS
OSR JOB INVENTORY TASK STATEMENTS:
0 I0236 A REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER
THAN SOLDERING

TASK #: 00560
ALIGN AND ADJUST THE AN/FTA-28 TELEPHONE TERMINAL TRANSMIT LEVEL
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 3
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0962 3.07 31.0 29.0 26.0 16.0 3.77 11.0
ACTIVITIES SKILL KNOWLEDGE:
A SET SWITCHES AND CONTROLS
A PERFORM FOUR WIRE SEND CONTROL AMPLIFIER LEVEL CHECK
A PERFORM FM SIGNALLING OUTPUT LEVEL CHECK
A PERFORM TRANSMIT SENSITIVITY CHECK
A PERFORM ORM SEND AMPLIFIER CHECK
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0962 A ADJUST AUDIO AMPLIFIER COMPONENTS

TASK #: 00570
ALIGN AND ADJUST THE AN/FTA-28 TELEPHONE TERMINAL TRANSMIT SIGNAL FREQUENCY AND TIME CONSTANT
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 3
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, FREQUENCY COUNTER,
HAND SET
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0621 3.24 20.0 16.0 16.0 10.0 5.38 11.0
ACTIVITIES SKILL KNOWLEDGE:
A SET SWITCHES AND CONTROLS
A CHECK TRANSMIT SIGNALLING FREQUENCIES
A CHECK TRANSMIT TIME CONSTANT
OSR JOB INVENTORY TASK STATEMENTS:
0 M0621 A ADJUST IN-BAND SIGNALING AND CONTROL CIRCUIT COMPONENTS

TASK #: 00580
TROUBLESHOOT THE AN/FTA-28 TELEPHONE TERMINAL RECEIVE SECTION
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 5
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, HAND SET, DIGITAL
MULTIMETER, OSCILLOSCOPE, CAPACITOR SUBSTITUTION BOX,
FREQUENCY COUNTER
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1035 2.93 13.0 16.0 15.0 11.0 5.49 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATION CHECKS
A ALIGN OR ADJUST COMPONENTS
K ISOLATE FAULTY MODULES OR COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1035 K ISOLATE MALFUNCTIONS IN SOLID-STATE AUDIO AMPLIFIERS

TASK #: 00590
ALIGN AND ADJUST THE AN/FTA-28 TELEPHONE TERMINAL RECEIVE LEVEL AND SENSITIVITY
Y
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 3
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, FREQUENCY COUNTER
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 T 1392 1.48 3.0 5.0 5.0 2.0 4.81 2.0
ACTIVITIES SKILL KNOWLEDGE:
A SET SWITCHES AND CONTROLS
A PERFORM LIMITER-DISCRIMINATOR CHECK
A PERFORM RECEIVE AMPLIFIER CHECK
A PERFORM NOISE REDUCING AND SYLLABIC CHECK
OSR JOB INVENTORY TASK STATEMENTS:
0 T1392 A ADJUST AUDIO CIRCUITS

TASK #: 00600
ALIGN AND ADJUST THE AN/FTA-28 TELEPHONE TERMINAL RECEIVE TIME CONSTANT
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM PRINCIPLES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31W1-2FTA28-1 AND LOCAL WORK CARDS
TTT: 3
SME OPINION: 3
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO LEVEL METER, HAND SET
REFERENCES:
T.O. 31W1-2FTA28-1
LOCAL WORK CARDS
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE, OR USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0962 3.07 31.0 29.0 26.0 16.0 3.77 11.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST RECEIVE TIME CONSTANT
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0962 A ADJUST AUDIO AMPLIFIER COMPONENTS

TASK #: 00610
INSPECT THE AN/FYA-74 ATOMIC BEAM FREQUENCY STANDARD GROUP
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: 7, 28, 56
OJT TRAINABLE: YES, NO, NOT WITHOUT BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2FYA74-2 AND T.O. W2-2FYA74-6WC-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, TOOL KIT
REFERENCES:
T.O. 31W2-2FYA74-2
T.O. W2-2FYA74-6WC-1
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI, USER COMPLAINT, SYSTEM MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0169 3.78 38.0 28.0 23.0 18.0 4.67 11.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK POWER SUPPLY OUTPUTS
A CHECK OUTPUT FREQUENCIES
A CLEAN INTERIOR/EXTERIOR OF EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
0 G0169 A PERFORM FREQUENCY RESPONSE TESTS

TASK #: 00620
TROUBLESHOOT AN/FYA-74 ATOMIC BEAM FREQUENCY STANDARD GROUP
DUTY CODE: X0
TASK STATUS: 3R-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, NOT WITHOUT BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-4-262-2, T.O. 31W2-2FYA-122,
T.O. 31W2-2FYA74-2, AND T.O. 31S5-2FYA-201
TTT: 3
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, CIRCUIT TESTER, HAND TOOLS
REFERENCES:
T.O. 31W4-4-262-2
T.O. 31W2-2FYA-122
T.O. 31W2-2FYA74-2
T.O. 31S5-2FYA-201
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: FAULT ISOLATED
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0229 2.78 44.0 37.0 34.0 20.0 2.85 10.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARDS
K ISOLATE FAULTY CIRCUIT CARD COMPONENTS
A REMOVE/REPLACE CIRCUIT CARDS AND CIRCUIT CARD COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 I0229 A REMOVE ELECTROMECHANICAL COMPONENTS USING METHODS OTHER THAN SOLDERING

TASK #: 00630
ALIGN AND ADJUST THE AN/FYA-74 ATOMIC BEAM FREQUENCY STANDARD GROUP COMPONENTS
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 2 YEARS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2FYA-122, T.O. 31S5-2FYA-201,
AND T.O. 31W2-2FYA74-2
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, LINEAR PHASE TIME COMPARATOR,
FREQUENCY COUNTER
REFERENCES:
T.O. 31W2-2FYA-122
T.O. 31W2-2FYA74-2
T.O. 31S5-2FYA-201
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI, USER COMPLAINT, SYSTEM MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0960 1.35 1.0 2.0 2.0 2.0 5.26 2.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST CONTROL INDICATOR
A ADJUST ATOMIC BEAM FREQUENCY STANDARD GROUP
A ADJUST DIGITAL CLOCK PULSE GENERATOR
A PERFORM VOLTAGE AND RIPPLE CHECKS
A PERFORM DATA DISTORTION CHECK
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0960 A ADJUST ATOMIC FREQUENCY STANDARD COMPONENTS

TASK #: 00640
ALIGN AND ADJUST THE AN/FYA-74 ATOMIC BEAM FREQUENCY STANDARD GROUP DIGITAL CLOCK PULSE GENERATOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 2 YEARS
OJT TRAINABLE: YES, NO, NOT WITHOUT BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S5-2FYA-201
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, FREQUENCY COUNTER
REFERENCES:
T.O. 31S5-2FYA-201
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI, USER COMPLAINT, SYSTEM MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0960 1.35 1.0 2.0 2.0 2.0 5.26 2.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM VOLTAGE AND RIPPLE CHECKS
A PERFORM DATA DISTORTION CHECK
A ADJUST DIGITAL CLOCK PULSE GENERATOR
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0960 A ADJUST ATOMIC FREQUENCY STANDARD COMPONENTS

TASK #: 00650
ALIGN AND ADJUST THE AN/FYA-74 ATOMIC BEAM FREQUENCY STANDARD GROUP POWER SUPPLY LIES
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 2 YEARS
OJT TRAINABLE: YES, NO, NOT WITHOUT BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-4-262-2
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE
REFERENCES:
T.O. 31W4-4-262-2
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI, USER COMPLAINT, SYSTEM MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0981 2.50 22.0 22.0 22.0 16.0 4.76 7.6
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM VOLTAGE AND RIPPLE CHECK
A ADJUST ALARM NULL
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0981 A ADJUST GENERAL PURPOSE POWER SUPPLY COMPONENTS

TASK #: 00660
INSPECT AN/GGC-38 MULTIPLEXER
DUTY CODE: XO
TASK STATUS: 3-OJT
TNNOTES:
TIMES ANALYZED: 2
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: 28, 56, WEEKLY (NON T.O. BY TECH CONTROL USING
REMOTE PATCH PANEL)
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-2GGC-216WC-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, TELETYPE TEST SET, TRANSMISSION TEST SET,
HAND TOOLS, VACUUM CLEANER, GENERAL PURPOSE CLEANING SOLVENT,
FREQUENCY COUNTER
REFERENCES:
T.O. 31W4-2GGC-216WC-1
CONDITIONS CUES:
COND: POWER ON
CUE: PMI, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM USER PATCH OFF PROCEDURES
A PERFORM POWER SUPPLY DC VOLTAGE CHECK
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A PERFORM SERIAL AND PARALLEL CLOCK SIGNALS CHECK
A PERFORM TRANSITION AND PARALLEL DATE OUTPUT SIGNAL
CHECK
A CLEAN CABINET INTERIOR/EXTERIOR
A ALIGN/ADJUST BIAS AND OUTPUT SIGNAL
A PERFORM KEYER OUTPUT FREQUENCY CHECK
A PERFORM CENTER FREQUENCY AND BIAS WAVEFORMS CHECK
OSR JOB INVENTORY TASK STATEMENTS:
0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF
INSTALLED EQUIPMENT

TASK #: 00670
TROUBLESHOOT AN/GGC-38 MULTIPLEXER
DUTY CODE: XO
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-2-GGC38-2 AND T.O. 31W4-2UGC-142
TTT: 5
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, TELETYPE TEST SET, TRANSMISSION TEST SET,
HAND TOOLS, DIGITAL MULTIMETER, FREQUENCY COUNTER
REFERENCES:
T.O. 31W4-2-GGC38-2
T.O. 31W4-2UGC-142
CONDITIONS CUES:
COND: POWER ON, PATCH OFF USER, RELAY REMAINS IN CABINET
CUE: PMI FINDING, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0746 2.20 10.0 8.0 7.0 4.0 6.05 7.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY KEYER
- K ISOLATE FAULTY CONVERTER
- K ISOLATE FAULTY PATCH PANEL BROKEN WIRES
- K ISOLATE FAULTY BITE (EQUIPMENT NOT USED FOR TESTING DUE TO NONAVAILABILITY OF PARTS)
- A REMOVE/REPLACE SUBASSEMBLY PARTS OR COMPONENTS
- K APPLY THEORY OF OPERATION FOR ANALOG-TO-DIGITAL AND DIGITAL-TO-ANALOG CONVERTERS

OSR JOB INVENTORY TASK STATEMENTS:

- 0 N0746 K ISOLATE MALFUNCTIONS IN DC POWER SUPPLY LINE ISOLATION ASSEMBLIES

TASK #: 00680

TROUBLESHOOT AN/GGC-38 MULTIPLEXER CIRCUIT CARDS

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 2

TNOTES:

- CONSEQUENCES: MINOR, DAMAGE, NONE
- HOW OFTEN: QUARTERLY
- OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
- QTP ADEQUATE: NONE
- TNG REFERENCE(S): T.O. 31W4-UGC-132 AND T.O. 31W4-2UGC-142
- TTT: 5

SME OPINION: 3

EQUIPMENT:

OSCILLOSCOPE, TELETYPE TEST SET, TRANSMISSION TEST SET, HAND TOOLS, DIGITAL MULTIMETER, FREQUENCY COUNTER, SOLDERING KIT

REFERENCES:

- T.O. 31W4-UGC-132
- T.O. 31W4-2UGC-142

CONDITIONS CUES:

- COND: CIRCUIT CARD IS ON EXTENDER CARD
- CUE: PMI FINDING, USER COMPLAINT

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0738 2.93 29.0 23.0 20.0 10.0 5.92 11.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY CIRCUIT CARD COMPONENTS
- A REMOVE AND REPLACE CIRCUIT CARD COMPONENTS
- K APPLY THEORY OF OPERATION FOR ANALOG-TO-DIGITAL AND DIGITAL-TO-ANALOG CONVERTERS

OSR JOB INVENTORY TASK STATEMENTS:

- 0 N0738 K ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT KEYERS

TASK #: 00690
ALIGN/ADJUST AN/GGC-38 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMFS ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-2UGC-142
TTT: 5
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, TELETYPE TEST SET, TRANSMISSION TEST SET,
HAND TOOLS, FREQUENCY COUNTER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31W4-2UGC-142
CONDITIONS CUES:
COND: POWER ON, PATCH OFF USER
CUE: PMI FINDING, COMPONENT REPLACEMENT, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0629 4.48 40.0 32.0 29.0 19.0 5.74 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST BIAS AND OUTPUT SIGNAL
A CALIBRATE BITE EQUIPMENT (NOT DONE DUE TO LACK OF USE
AND PARTS)
A ALIGN/ADJUST CENTER CONVERTER FREQUENCY AND BIAS
A ALIGN/ADJUST KEYER OUTPUT
K APPLY THEORY OF OPERATION FOR ANALOG-TO-DIGITAL AND
DIGITAL-TO-ANALOG CONVERTERS
OSR JOB INVENTORY TASK STATEMENTS:
0 M0629 A ALIGN FREQUENCY DIVISION MULTIPLEXERS

TASK #: 00700
INSPECT AN/GRC-203 RML RECEIVER
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 7, 60
OJT TRAINABLE: YES, NO TASK REQUIRES ELECTRONIC FUNDAMENTALS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-4-190-1 AND T.O. 31R5-4-1906MC-6WC-1
TTT: 5
SME OPINION: 3
RECEIVER MAINTENANCE DEPENDS UPON TAKING SYSTEM DOWN FOR
MAINTENANCE WITH FAA COORDINATION
EQUIPMENT:
SIGNAL GENERATOR WITH HIGH MICROWAVE FREQUENCY, OSCILLOSCOPE
WITH DELAY FUNCTION, DIGITAL MULTIMETER, LINT FREE CLOTH, DUST
BRUSHES, CABLES, AND 75 OHM TERMINATION CABLE, HANDTOOLS
REFERENCES:
T.O. 31R5-4-190-1
T.O. 31R5-4-1906MC-6WC-1
CONDITIONS CUES:
COND: CO-LOCATED WITH AIR TRAFFIC CONTROL
CUE: PMI SCHEDULE, RECEIVER FAILURE
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0418 4.04 18.0 20.0 17.0 10.0 4.22 11.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A INSPECT LAMPS FOR LIT CONDITION
A CHECK VU METER READINGS
A CHECK TERMINATION FOR CORRECT OHM VALUE
A CHECK AZIMUTH CHANGE PULSE (ACP)
A CHECK AZIMUTH RECURRING PULSE (ARP)
A CHECK MOVING TARGET INDICATOR (MTI)
A CHECK RADAR PRETRIGGER
A CHECK BEACON VIDEO
A PERFORM SIGNAL ANALYSIS IN COORDINATION WITH FAA
OSR JOB INVENTORY TASK STATEMENTS:
0 K0418 A PERFORM PMI ON DIGITAL RECEIVERS

TASK #: 00710
TROUBLESHOOT THE AN/GRC-203 RML RECEIVER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 1 EVERY 2 YEARS
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-4-190-1, T.O. 31R5-4-192-2-1,
AND T.O. 31R4-4-192-2
TTT: NONE
SME OPINION: 5
EQUIPMENT:
SIGNAL GENERATOR WITH HIGH MICROWAVE FREQUENCY, OSCILLOSCOPE
WITH DELAY FUNCTION, DIGITAL MULTIMETER, PULSE GENERATOR,
AUDIO GENERATOR (FAA COORDINATED MAINTENANCE), EXTENDER CARD,
HAND TOOLS
REFERENCES:
T.O. 31R5-4-190-1
T.O. 31R5-4-192-2-1
T.O. 31R4-4-192-2
CONDITIONS CUES.
COND: CO-LOCATED WITH AIR TRAFFIC CONTROL
CUE: RECEIVER FAILED, PMI FINDING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0375 4.15 10.0 15.0 15.0 11.0 6.60 11.0
ACTIVITIES SKILL KNOWLEDGE:
A MEASURE INPUT SIGNAL FROM ANTENNA
A CHECK VU METER READINGS
A CHECK OUTPUT OF SEPARATOR
OSR JOB INVENTORY TASK STATEMENTS:
0 K0375 K ISOLATE MALFUNCTIONS IN DIGITAL RECEIVERS

TASK #: 00720
ALIGN/ADJUST AN/GRC-203 RML RECEIVER
DUTY CODE: X0
TASK STATUS: 3R-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-4-192-2-1
TTT: NONE
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, HANDTOOLS
REFERENCES:
T.O. 31R5-4-192-2-1
CONDITIONS CUES:
COND: CO-LOCATED WITH AIR TRAFFIC CONTROL
CUE: RECEIVER HAS BEEN REPLACED
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0964 3.09 33.0 32.0 28.0 16.0 4.72 12.0
ACTIVITIES SKILL KNOWLEDGE:
A SET RECEIVER SWITCH AND CHECK FAULT LIGHTS
A ADJUST AFC FOR CENTER READING
A RESET RECEIVER SWITCH AND CHECK FAULT LIGHTS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0964 A ADJUST AUTOMATIC FREQUENCY CONTROL (AFC) COMPONENTS

TASK #: 00730
INSPECT AN/GRC-203 RML SEPARATOR
DUTY CODE: X0
TASK STATUS: 3R-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 7, 60
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-4-190-1 AND T.O. 31R5-4-1906MC-6WC-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR WITH HIGH MICROWAVE FREQUENCY, OSCILLOSCOPE
WITH DELAY FUNCTION, DIGITAL MULTIMETER, LINT FREE CLOTH, DUST
BRUSHES, CABLES, AND 75 OHM TERMINATION CABLE, HANDTOOLS
REFERENCES:
T.O. 31R5-4-190-1
T.O. 31R5-4-1906MC-6WC-1
CONDITIONS CUES:
COND: CO-LOCATED WITH AIR TRAFFIC CONTROL
CUE: PMI SCHEDULE, SEPARATOR FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0420 4.52 50.0 39.0 35.0 17.0 4.84 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A INSPECT LAMPS FOR LIT CONDITION
A CHECK TERMINATION FOR CORRECT OHM VALUE
A CHECK AZIMUTH CHANGE PULSE (ACP)
A CHECK AZIMUTH RECURRING PULSE (ARP)
A CHECK MOVING TARGET INDICATOR (HTI)
A CHECK RADAR PRETRIGGER
A CHECK BEACON VIDEO
A PERFORM SIGNAL ANALYSIS IN COORDINATION WITH FAA
OSR JOB INVENTORY TASK STATEMENTS:
0 K0420 A PERFORM PMI ON FM RECEIVERS

TASK #: 00740
TROUBLESHOOT AN/GRC-203 RML SEPARATOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-4-190-1 AND T.O. 31R5-4-1906MC-6WC-1
TTT: NONE
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR WITH HIGH MICROWAVE FREQUENCY, OSCILLOSCOPE
WITH DELAY FUNCTION, DIGITAL MULTIMETER, LINT FREE CLOTH, DUST
BRUSHES, CABLES, AND 75 OHM TERMINATION CABLE, HANDTOOLS,
AUDIO TONE GENERATOR
REFERENCES:
T.O. 31R5-4-190-1
T.O. 31R5-4-1906MC-6WC-1
CONDITIONS CUES:
COND: CO-LOCATED WITH TOWER
CUE: SEPARATOR FAILURE, FAILED INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0390 3.74 16.0 16.0 19.0 15.0 6.24 11.0
ACTIVITIES SKILL KNOWLEDGE:
A MEASURE INPUT SIGNAL FROM ANTENNA
A CHECK OUTPUT OF RECEIVER
A CHECK GROUNDING CONNECTIONS
A REMOVE/REPLACE SUBASSEMBLY PARTS OR COMPONENTS
OSR JOB INVENTORY TASKS:
0 K0390 K ISOLATE MALFUNCTIONS IN SOLID-STATE FM RECEIVERS

TASK #: 00750
ALIGN/ADJUST AN/GRC-203 RML SEPARATOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 60
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-4-1906MC-6WC-1 AND T.O. 31R5-4-190-1
TTT: NONE
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE
REFERENCES:
T.O. 31R5-4-1906MC-6WC-1
T.O. 31R5-4-190-1
CONDITIONS CUES:
COND: CO-LOCATED WITH AIR TRAFFIC CONTROL
CUE: PMI SCHEDULE, FAILED INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 K 0374 3.98 29.0 29.0 30.0 18.0 5.97 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATION CHECK
A ALIGN/ADJUST ACP/ARP CIRCUIT CARD
OSR JOB INVENTORY TASK STATEMENTS:
0 K0374 A ALIGN FM RECEIVERS

TASK #: 00760
SET UP/TEAR DOWN AN/GSC-47 MANPACK/DEB RECONSTITUTION PACKAGE
DUTY CODE: XO
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LOCAL JQS
TTT: NONE
SME OPINION: 5
EQUIPMENT:
COMMON HANDTOOLS, POCKET TRANSIT
REFERENCES:
T.O. 31R5-4-192-2-1
T.O. 31R5-4-192-2-2
CONDITIONS CUES:
COND: IN FIELD, SPECIALIZED TRAINING REQUIRED FOR TOWER
CLIMBING CERTIFICATION
CUE: DEPLOYMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304XO R 1287 2.00 12.0 16.0 21.0 11.0 5.68 7.0
304XO R 1325 1.15 11.0 18.0 23.0 11.0 3.99 2.0
ACTIVITIES SKILL KNOWLEDGE:
A INVENTORY PARTS
A UNPACK/PACK
A SET UP TRIPOD OR ANTENNA MOUNTS
A MOUNT ANTENNA
A INSTALL/REMOVE FEEDHORN
A INSTALL/REMOVE RECEIVER
A INSTALL/REMOVE TRANSMITTER
A INSTALL/REMOVE POWER AMPLIFIER (IF NEEDED)
A CONNECT/DISCONNECT ORDER WIRE
A INSTALL/REMOVE TI-4000
A CONNECT/DISCONNECT GENERATORS
A GROUND EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
0 R1287 A INSTALL MOBILE COMMUNICATION EQUIPMENT
0 R1325 A REMOVE MOBILE COMMUNICATION EQUIPMENT

TASK #: 00770
PERFORM AN/GSC-47 MANPACK SITE PLANNING
DUTY CODE: XO
TASK STATUS: 3-OJT
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MAJOR, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): CDC 304XO
TTT: NONE
SME OPINION: 5
EQUIPMENT:
POCKET TRANSIT, MAPS, TOPOGRAPHICAL CHARTS
REFERENCES:
T.O. 31-1-141 SERIES
CONDITIONS CUES:
COND: OFFICE BEFORE DEPLOYMENT; ON-SITE IN FIELD
CUE: ECD FOR WAR; LOCALLY DETERMINED FOR TRAINING
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1386 .72 1.0 1.0 1.0 2.0 6.52 2.0

ACTIVITIES SKILL KNOWLEDGE:

- A DETERMINE OPERATING LOCATION
- A DEVELOP WRITTEN DEPLOYMENT PLAN
- A INSPECT LOCATION VISUALLY
- A OBTAIN AND REVIEW MAPS
- K APPLY BASIC MATH (ADDITION AND SUBTRACTION)
- K CALCULATE PATH PROFILE
- K INTERPRET TOPOGRAPHICAL MAPS

OSR JOB INVENTORY TASK STATEMENTS:

- 0 S1386 A SELECT COMMUNICATION SITES FOR LINE OF SIGHT LINKS

TASK #: 00780

OPERATE AN/GSC-47 MANPACK MEP-104A GENERATOR SET

DUTY CODE: XO

TASK STATUS: 3-OJT

TIMES ANALYZED:

TNOTES:

CONSEQUENCES: MAJOR, DAMAGE, INJURY

HOW OFTEN: MONTHLY

OJT TRAINABLE: YES

QTP ADEQUATE: YES, BUT TT APPLIES TO AFSC 542X2 AND COVERS
MAINTENANCE, OPERATION, AND TROUBLESHOOTING

TNG REFERENCE(S): QTP 542A1-58DB AND LOCAL TRAINING PLAN

TTT: NONE

SME OPINION: 5

EQUIPMENT:

MEP-104A GENERATOR SET

REFERENCES:

T.G. 38G2-102-2

CONDITIONS CUES:

COND: FIELD

CUE: DIRECTIVE FROM ECD FOR WAR; LOCAL DIRECTIVE FOR TRAINING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 R 1298 1.78 11.0 10.0 12.0 8.0 3.97 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A PLUG IN POWER CABLE
- A PULL STARTING CORD
- A MONITOR METER READINGS FOR VOLTAGE AND FREQUENCY
- A SWITCH LOAD CONTACT

OSR JOB INVENTORY TASK STATEMENTS:

- 0 R1298 A OPERATE POWER GENERATORS

TASK #: 00790
INSPECT AND ADJUST AN/GSC-47 MANPACK/DEB RECONSTITUTION PACKAGE TRANSMITTER AND RECEIVER

DUTY CODE: XO
TASK STATUS: 3-OJT
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MAJCR, NONE, INJURY
HOW OFTEN: 84 DAYS
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LOCAL JQS
TTT: NONE
SME OPINION: 5

EQUIPMENT:
TRANSMISSION TEST SET (HP3555), TEST OSCILLATOR (HP654),
VOLT OHM METER (DIGITAL MULTIMETER), FREQUENCY SELECTIVE
VOLTMETER, SIGNAL GENERATOR, FREQUENCY COUNTER, POWER METER
WITH BOLDFITTER, 60DB ATTENUATION, RF CABLES, BNC CABLES, PHILLIPS
#0, NON-METALLIC SCREWDRIVER, TOOL KIT, CABLE ADAPTORS, ANALOG
MULTIMETER, OSCILLOSCOPE

REFERENCES:
T.O. 31R5-4-192-2-1

CONDITIONS CUES:
COND: IN SHOP BENCH CHECK
CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A SET UP TRANSMITTER
- A CHECK/ADJUST POWER SUPPLY VOLTAGES
- A CHECK/ADJUST TRANSMITTER POWER
- A CHECK/ADJUST SYNTHESIZER
- A CHECK/ADJUST CARRIER DEVIATION
- A CHECK/ADJUST AUTOMATIC FREQUENCY CONTROL
- A CHECK TRANSMITTER OUTPUT POWER
- A CHECK TRANSMITTER OUTPUT FREQUENCY
- A ESTABLISH RF LOOP
- A CONNECT TRANSMITTER TO RECEIVER
- A CHECK/ADJUST RECEIVER POWER SUPPLY VOLTAGES
- A CHECK RECEIVER AFC
- A TUNE RECEIVER LOCAL OSCILLATOR FREQUENCY TO TRANSMITTER FREQUENCY
- A CHECK/ADJUST RECEIVER SIGNAL STRENGTH
- A CHECK/ADJUST RECEIVER THRESHOLD
- A CHECK/ADJUST RECEIVER DEMODULATION
- A CHECK/ADJUST RECEIVER IF OUTPUT
- A PERFORM RECEIVER SENSITIVITY CURVES
- A CLEAN EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:
0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF INSTALLED EQUIPMENT

TASK #: 00800
INSPECT AN/GSC-47 MANPACK/DEB RECONSTITUTION PACKAGE TI-4000
DUTY CODE: XO
TASK STATUS: 3-OJT
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MAJOR, NONE, INJURY
HOW OFTEN: 28, 56, AND 84 DAY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30VA AND AN/FCC-97 MULTIPLEXER SET
TTT: NONE
SME OPINION: 5
EQUIPMENT:
PATCHING CABLES, DIGITAL MULTIMETER, CLEANING AND CORROSION
CONTROL MATERIALS, OSCILLOSCOPE
REFERENCES:
T.O. 31W2-4-287-6WC-1
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK EQUIPMENT FOR AIR CIRCULATION
A CHECK FOR NO ALARM INDICATIONS
A CHECK INDIVIDUAL PORT CONTINUITY
A MEASURE POWER SUPPLY VOLTAGES
A TEST OUTPUT SIGNAL QUALITY
OSR JOB INVENTORY TASK STATEMENTS:
0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF
INSTALLED EQUIPMENT

TASK #: 00810
TROUBLESHOOT AN/GSC-47 MANPACK/DEB RECONSTITUTION PACKAGE AND REPLACE PARTS
DUTY CODE: XO
TASK STATUS: 3R-KP
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE:
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-4-192-2-1, T.O. 31R5-4-192-2-2,
T.O. 31W2-4-287-1, AND LOCALLY DEVELOPED
PROCEDURES
TTT: NONE
SME OPINION: NONE
EQUIPMENT:
EXTENSION CABLES, SPECTRUM ANALYZER, SIGNAL GENERATOR,
POWER METER VOLTMETER, FREQUENCY COUNTER, AUDIO OSCILLATOR,
FREQUENCY SELECTIVE VOLTMETER, OSCILLOSCOPE, DIGITAL MULTIMETER,
ATTENUATORS, CONNECTORS, RF CABLES, BNC CABLES, TOOL KITS,
NON-METALLIC SCREWDRIVER, PATTERN GENERATOR, JUMPER WIRE, TWINAX
PATCHCORD, LOGIC PULSER, SOLDERING KIT
REFERENCES:
T.O. 31R5-4-192-2-1
T.O. 31R5-4-192-2-2
T.O. 31W2-4-287-1
LOCALLY DEVELOPED PROCEDURES
CONDITIONS CUES:
COND: SHOP OR FIELD
CUE: PMI RESULTS, OPERATIONAL FAILURES
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1036 3.33 14.0 17.0 16.0 12.0 5.74 11.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARDS, MODULES, AND MINOR
PARTS
A REMOVE AND REPLACE FAULTY CIRCUIT CARDS, MODULES AND
MINOR PARTS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1036 K ISOLATE MALFUNCTIONS IN SOLID-STATE BASEBAND AMPLIFIERS

TASK #: 00820
ALIGN/ADJUST AN/GSC-47 MANPACK TRANSMITTER AND RECEIVER
DUTY CODE: XO
TASK STATUS: 3R-KP
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LOCAL JQS
TTT: NONE
SME OPINION: 5
EQUIPMENT:
EXTENSION CABLES, SPECTRUM ANALYZER, SIGNAL GENERATOR,
POWER METER BOLOMETER, FREQUENCY COUNTER, AUDIO OSCILLATOR,
FREQUENCY SELECTIVE VOLTMETER, OSCILLOSCOPE, DIGITAL MULTIMETER,
ATTENUATORS, CONNECTORS, RF CABLES, BNC CABLES, TOOL KITS,
NON-METALLIC SCREWDRIVER
REFERENCES:
T.O. 31R5-4-192-2-1
CONDITIONS CUES:
COND: BENCH CHECK
CUE: PMI RESULTS, REQUIRED PRIOR TO DEPLOYMENT, FOR TRAINING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB IENL 5SKL 7SKL TD ATI
304X0 L 0522 3.22 19.0 21.0 19.0 12.0 5.80 11.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST TRANSMITTER AND RECEIVER AC POWER SUPPLIES
A ALIGN/ADJUST TRANSMITTER FREQUENCY
A TUNE TRANSMITTER
A ALIGN/ADJUST TRANSMITTER AFC
A ALIGN/ADJUST TRANSMITTER DEVIATION
A TEST SUBCARRIER AMPLITUDE/DEVIATION
A ALIGN/ADJUST RECEIVER AFC REFERENCE VOLTAGE
A ALIGN/ADJUST RECEIVER IF SIGNAL STRENGTH
A MEASURE RECEIVER RF/IF GAIN
A MEASURE RECEIVER AFC ERROR/LOCK VOLTAGES
A CHECK AFC TRACKING RANGE
A MEASURE RECEIVER DEMODULATION
A ALIGN/ADJUST BASEBAND LEVELS
A ALIGN PILOT DETECTION
OSR JOB INVENTORY TASK STATEMENTS:
0 L0522 A ADJUST TRANSMITTER INTERMEDIATE FREQUENCY (IF) AMPLIFIER COMPONENTS

TASK #: 00830
INSPECT AN/CSM-266 TEST SET FOR AN/GSS-29
DUTY CODE: XO
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 84, 168
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30MA (EACH MAJOR SUBASSEMBLY AS IT RELATES TO AN/GSS-29)
TTT: 3
SME OPINION: 3
MAJOR SUBASSEMBLIES CAN BE ACCOMPLISHED BECAUSE THEY ARE ALL DONE 84 DAYS
EQUIPMENT:
CLEANING MATERIALS (FLASHLIGHT, VACUUM, RAGS, CLEANING SOLVENT)
MACHINE OIL
REFERENCES:
T.O. 31S9-2GSS29-6WC-1
T.O. 31S9-2G-246WC-1
T.O. 31S9-2G-256WC-1
T.O. 31S9-2G-266WC-1
T.O. 31S9-2G-196WC-1
T.O. 31S9-2G-166WC-1
T.O. 31S9-2G-146WC-1
T.O. 31S9-4-42-6WC-1

CONDITIONS CUES:
COND: BISS SHOP, DAY
CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION, TRAINING PURPOSES

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0871 2.57 15.0 18.0 17.0 7.0 6.08 7.0
304X0 G 0155 4.11 47.0 31.0 25.0 19.0 3.67 12.0

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK ALARM MONITOR DECODER STATUS (AMDS)
A CHECK ALARM MONITOR OPERATOR STATUS (AMOS)
A RESET INTERNAL CLOCK
A CLEAN AND LUBRICATE SPRINGS AND GUIDES

OSR JOB INVENTORY TASK STATEMENTS:
0 G0155 A OBSERVE STATUS DISPLAY PANELS TO DETERMINE EQUIPMENT OPERATION (SIGNAL QUALITY)
0 P0871 K ISOLATE SYSTEM MALFUNCTIONS TO CODER MULTIPLEXER SENSOR DATA

TASK #: 00840
TROUBLESHOOT AN/GSM-266 TEST SET FOR AN/GSS-29
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: SEMIANNUAL
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30MA
TTT: 3
SME OPINION: 3

EQUIPMENT:
OSCILLOSCOPE, SENSOR SIMULATOR TEST SET, ELECTRONIC SYSTEM TEST SET, ALARM SYSTEM TEST SET, ELECTRIC POWER TEST SET, TOOL CHEST, INTERCONNECTING CABINET, FAULT LOCATING INDICATOR, TEST PANEL

REFERENCES:
T.O. 31S9-2G-141
T.O. 31S9-2G-161
T.O. 31S9-2G-191
T.O. 31S9-2G-241
T.O. 31S9-2G-251
T.O. 31S9-2G-261
T.O. 31S9-2G-271
T.O. 31S9-4-42-1
T.O. 31S9-2GSS29-7
T.O. 31S9-2GSS29-11

CONDITIONS CUES:
COND: BISS SHOP, DAY, POWER ON
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATIONS, TRAINING PURPOSES

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0847 2.76 23.0 20.0 18.0 8.0 6.61 11.0

ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY LINE REPLACEABLE UNITS (LRU)
A REMOVE AND REPLACE LINE REPLACEABLE UNITS (LRU)

OSR JOB INVENTORY TASK STATEMENTS:
0 P0847 K ISOLATE MALFUNCTIONS IN SECURITY SYSTEM ANNUNCIATORS

TASK #: 00850
TROUBLESHOOT AN/GSM-266 TEST SET LINE REPLACEABLE UNITS (LRU) TO COMPONENT LEVEL

DUTY CODE: XO
TASK STATUS: 3-OJT
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: SEMIANNUAL
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30MA
TTT: 5
SME OPINION: 3 LVL LRU/5-7 LVL COMPONENT LEVEL

EQUIPMENT:
4 TRACE STORAGE OSCILLOSCOPE, DIGITAL MULTIMETER, TOOL CHEST
ELECTRONIC SYSTEM TEST SET, SENSOR SIMULATOR TEST SET,
ELECTRICAL POWER TEST SET, FREQUENCY COUNTER, SIGNAL GENERATOR
GROUNDING WRIST STRAP, ELECTRO STATIC DISCHARGE CONTAINER,
SOLDER KIT, ANTI-STATIC MATTING

REFERENCES:
T.O. 31S9-4-42-1
T.O. 31S9-2C-241
T.O. 31S9-2G-251
T.O. 31S9-2G-261
T.O. 31S9-2G-271
T.O. 31S9-2G-141
T.O. 31S9-2G-161
T.O. 31S9-2G-191

CONDITIONS CUES:
COND: BISS SHOP, DAY, POWER ON
CUE: PMI FINDINGS, TRAINING, QUALITY CONTROL EVALUATION,
PANEL INDICATORS, AUDIO ALARMS

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB IENL 5SKL 7SKL TD ATI
304X0 P 0870 2.26 10.0 15.0 14.0 6.0 7.04 7.0

ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARDS
K ISOLATE FAULTY CIRCUIT CARD COMPONENTS
K ISOLATE FAULTY MINOR HARDWARE
A REMOVE/REPLACE CIRCUIT CARDS, CIRCUIT CARD COMPONENTS, AND MINOR HARDWARE

OSR JOB INVENTORY TASK STATEMENTS:
0 P0870 K ISOLATE MALFUNCTIONS IN CMSD PRINTED CIRCUIT BOARD TO
COMPONENTS

TASK #: 00860
ALIGN/ADJUST AN/GSM-266 TEST SET POWER SUPPLIES AND PRINTER

DUTY CODE: XO
TASK STATUS: 3-OJT
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-30MA
TTT: 5
SME OPINION: 5

EQUIPMENT:
TOOL CHEST, FREQUENCY COUNTER, THICKNESS GAUGE, INSERTION TOOL,
EXTRACTION TOOL, DIGITAL MULTIMETER

REFERENCES:
T.O. 31S9-4-42-1
T.O. 31S9-2G-241
T.O. 31S9-2G-251
T.O. 31S9-2G-261
T.O. 31S9-2G-191
T.O. 31S9-2G-161

CONDITIONS CUES:
COND: BISS SHOP, POWER ON, DAY
CUE: CONTROL MONITOR SENSOR DATA TROUBLESHOOT FINDINGS,
QUALITY CONTROL EVALUATIONS, TRAINING PURPOSES

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0725 2.61 22.0 19.0 16.0 8.0 4.48 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST POWER SUPPLIES
A ALIGN/ADJUST PRINTER
OSR JOB INVENTORY TASK STATEMENTS:
0 N0725 A ADJUST DIRECT CURRENT (DC) POWER SUPPLY COMPONENTS

TASK #: 00870
INSPECT AN/GPS-15 INTERIOR MOTION DETECTOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 84
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-3ME AND T.O. 31S9-4-49-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, COMMON SCREWDRIVER, CORROSION PREVENTIVE
COMPOUND, GENERAL PURPOSE CLEANER, RAGS, KEY, LOGIC CURRENT
PROBE
REFERENCES:
T.O. 31S9-4-4906WC-1
T.O. 31S9-4-49-1
CONDITIONS CUES:
COND: INSIDE, ALL EXTERIOR DOORS CLOSED, LIMITED MOVEMENT IN AREA
CUE: PMI LISTING, TECHNICAL INSPECTIONS, WORK ORDERS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0873 2.30 11.0 8.0 7.0 4.0 4.43 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM LOCAL COORDINATION PROCEDURES WITH SP
A PERFORM BATTERY TEST
A PERFORM WALK TEST
A PERFORM 84 DAY SERVICING
OSR JOB INVENTORY TASK STATEMENTS:
0 P0873 A PERFORM PMI ON SECURITY SYSTEM ANTIPERSONNEL RADAR
SYSTEMS

TASK #: 00880
ADJUST AN/GPS-15 INTERIOR MOTION DETECTOR AMPLIFIER GAIN
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 14, 21
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-3ME
TTT: 3
SME OPINION: 3
EQUIPMENT:
COMMON SCREW DRIVERS, KEYS
REFERENCES:
T.O. 31S9-4-49-1
CONDITIONS CUES:
COND: INSIDE, DOORS CLOSED, LIMITED MOVEMENT IN AREA
CUE: OPEN WORK ORDER, PROBLEM DISCOVERED DURING PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0820 2.24 11.0 14.0 14.0 6.0 6.32 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM DETECTION CAPABILITY TO ADJUST SENSOR
A PERFORM DETECTION CAPABILITY TO VERIFY PROPER OPERA-
TION
OSR JOB INVENTORY TASK STATEMENTS:
0 P0820 A ADJUST SECURITY SYSTEM DOPPLER SENSOR SYSTEM COMPO-
ONENTS

TASK #: 00890
TROUBLESHOOT AN/GPS-15 INTERIOR MOTION DETECTOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC BASICS
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X0-3ME
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, MICROWAVE FREQUENCY COUNTER, OSCILLOSCOPE,
COMMON HANDTOOLS, LADDER, KEYS, SUB-MINIATURE RECONNECTORS,
50 OHM TERMINATION PLUG, TEST ANTENNA, GROUNDING WRIST STRAP,
HISTORICAL DATA, SOLDERING STATION
REFERENCES:
T.O. 31S9-4-49-1
CONDITIONS CUES:
COND: ON/OFF EQUIPMENT, LIMITED MOVEMENT WITHIN ROOM, ADVERSE
WEATHER
CUE: OPEN WORK ORDER, PROBLEM DURING TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM PROPER COORDINATION PROCEDURES
A PERFORM DETECTION CAPABILITY TEST TO ISOLATE TO CPS
OR DETECTOR
A REMOVE AND REPLACE FAULTY PRINTED CIRCUIT BOARD
OSR JOB INVENTORY TASK STATEMENTS:
0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF
INSTALLED EQUIPMENT

TASK #: 00900
INSPECT AN/GSQ-199 COMMUNICATIONS CENTRAL
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: 28, 56, 168
OJT TRAINABLE: NO, BECAUSE OF EXTREME CONSEQUENCES
QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 5
EQUIPMENT:
CLEANING SUPPLIES, NO-OXIDATION GREASE, VACUUM, AIR COMPRESSOR,
TOOL BAG, TELEPHONE TEST SET, FREQUENCY COUNTER, OSCILLOSCOPE,
AC VACUUM TUBE VOLTMETER/DIGITAL VOLTMETER, DISTORTION ANALYZER,
ISOLATION TRANSFORMER, DUMMY LOAD, 560 OHM RESISTOR, 30 VOLT
VOLT POWER SUPPLY, DC POWER SUPPLY
REFERENCES:
T.O. 31S9-2GSQ199-1 (OVERALL)
T.O. 31S9-2GSQ199-11 (CONSOLE)
T.O. 31S9-2GSQ199-21 (AMPLIFIER AUDIO FREQUENCY-EQUIP ROOM)
T.O. 31S9-2GSQ199-31 (RINGER GENERATION-EQUIP ROOM)
T.O. 35C3-3-117-1C (LORAIN FLOTROL RECTIFIER)
LOCALLY DEVELOPED PMI FROM 2149CS (T.O. 31S9-2GSQ199-6WC-1)
BLUEPRINTS
CONDITIONS CUES:
COND: FIELD LOCATION, WEAPON STORAGE AREA, SECURITY CENTRAL,
ALERT FACILITY
CUE: LOCALLY DEVELOPED PMI SCHEDULE, QUALITY CONTROL EVALUATION,
AUDIO/VISUAL ALARM SOUNDS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1099 1.91 12.0 12.0 10.0 3.0 3.90 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A CLEAN AND LUBRICATE
- A CHECK BATTERIES
- A CHECK RING GENERATOR
- A CHECK AUDIO FREQUENCY AMPLIFIER
- A CHECK LORAIN FLOTROL RECTIFIER FLOAT VOLTAGE ADJUSTMENTS
- A CHECK LORAIN FLOTROL RECTIFIER EQUALIZATION VOLTAGE
- A CHECK LORAIN FLOTROL RECTIFIER CURRENT LIMITING
- A CHECK LORAIN FLOTROL RECTIFIER OVER VOLTAGE SHUTDOWN
- A INSPECT CONTROL AREA
- A INSPECT STATION TELEPHONE INSTRUMENTS
- A INSPECT EQUIPMENT ROOM
- A CLEAN AND SERVICE EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:
0 Q1099 A PERFORM PMI ON PA SYSTEMS

TASK #: 00910
INSPECT AN/GSQ-199 EQUIPMENT ROOM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2

TNOTES:

- CONSEQUENCES: MAJOR, DAMAGE, INJURY
- HOW OFTEN: 28, 56, 168
- OJT TRAINABLE: NO, BECAUSE OF EXTREME CONSEQUENCES
- QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
- TNG REFERENCE(S): QTP 304X0-30MC
- TTT: 3
- SME OPINION: 5

EQUIPMENT:

- CLEANING SUPPLIES, NU-OXIDATION GREASE, VACUUM, AIR COMPRESSOR, TOOL BAG, OSCILLOSCOPE, FREQUENCY COUNTER, DC POWER SUPPLY, AC VACUUM TUBE VOLT METER/DIGITAL VOLTMETER, 30 VOLT POWER SUPPLY, DISTORTION ANALYZER, ISOLATION TRANSFORMER, DUMMY LOAD, 560 OHM RESISTOR, TOOL CHEST, 30 VOLT POWER SUPPLY

REFERENCES:

- T.O. 31S9-2GSQ199-1 (OVERALL)
- T.O. 31S9-2GSQ199-11 (CONSOLE)
- T.O. 31S9-2GSQ199-21 (AMPLIFIER AUDIO FREQUENCY-EQUIP ROOM)
- T.O. 31S9-2GSQ199-31 (RINGER GENERATION-EQUIP ROOM)
- LOCALLY DEVELOPED PMI FROM 2149CS (T.O. 31S9-2GSQ199-6WC-1)

BLUEPRINTS

CONDITIONS CUES:

- COND: WEAPON STORAGE AREA, ALERT FACILITY, INSIDE/OUTSIDE, DAY/NIGHT, EQUIPMENT RELEASED, POWER ON
- CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION, AUDIO/VISUAL ALARM SOUNDS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0872 2.67 27.0 25.0 22.0 10.0 4.68 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT CABINET
- A INSPECT BATTERY CABINET
- A INSPECT AUDIO FREQUENCY AMPLIFIER
- A INSPECT FILTER PANEL
- A INSPECT FUSE PANEL
- A INSPECT KEY SERVICE UNIT PANEL
- A INSPECT RING GENERATOR
- A INSPECT POWER SUPPLY
- A INSPECT TERMINAL BLOCKS
- A INSPECT PUBLIC ADDRESS SYSTEM
- A CLEAN AND SERVICE EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:
0 P0872 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON PERIMETER SECURITY SYSTEMS

TASK #: 00920
INSPECT AN/GSQ-199 CONTROL AREA (LOCAL/REMOTE)
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: 28, 56, 168
OJT TRAINABLE: NO, BECAUSE OF EXTREME CONSEQUENCES
QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 5
EQUIPMENT:
CLEANING SUPPLIES, TOOL BAG, TELEPHONE TEST SET
REFERENCES:
T.O. 31S9-2GSQ199-1 (OVERALL)
T.O. 31S9-2GSQ199-11 (CONSOLE)
T.O. 31S9-2GSQ199-21 (AMPLIFIER AUDIO FREQUENCY-EQUIP ROOM)
T.O. 31S9-2GSQ199-31 (RINGER GENERATION-EQUIP ROOM)
LOCALLY DEVELOPED PMI FROM 2149CS (T.O. 31S9-2GSQ199-6WC-1)
BLUEPRINTS
CONDITIONS CUES:
COND: ALERT FACILITY, WING SECURITY, DAY/NIGHT, EQUIPMENT
RELEASED, POWER ON, INSIDE/OUTSIDE
CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION, AUDIO/VISUAL
ALARM SOUNDS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0872 2.67 27.0 25.0 22.0 10.0 4.68 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT COMMUNICATION CONTROL CONSOLE
A INSPECT SPEAKER PHONE
A INSPECT STANDARD 6 BUTTON TELEPHONE SET
A INSPECT TERMINAL CABINETS AND BOARDS
A CLEAN AND SERVICE EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
0 P0872 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
PERIMETER SECURITY SYSTEMS

TASK #: 00930
INSPECT AN/GSQ-199 STATION TELEPHONE INSTRUMENTS
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 28, 56, 168
OJT TRAINABLE: YES
QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 3
EQUIPMENT:
TELEPHONE TEST SET, TOOL BAG, CLEANING SUPPLIES, DIGITAL
MULTIMETER
REFERENCES:
T.O. 31S9-2GSQ199-1 (OVERALL)
T.O. 31S9-2GSQ199-11 (CONSOLE)
T.O. 31S9-2GSQ199-21 (AMPLIFIER AUDIO FREQUENCY-EQUIP ROOM)
T.O. 31S9-2GSQ199-31 (RINGER GENERATION-EQUIP ROOM)
LOCALLY DEVELOPED PMI FROM 2149CS (T.O. 31S9-2GSQ199-6WC-1)
BLUEPRINTS
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITY, OUTSIDE/INSIDE,
DAY/NIGHT, EQUIPMENT RELEASED, POWER ON
CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION, AUDIO/VISUAL
ALARM SOUNDS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0872 2.67 27.0 25.0 22.0 10.0 4.68 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT WATERPROOF OUTSIDE WALL TELEPHONE
- A INSPECT SPEAKERS
- A INSPECT TELEPHONE JACK BOX, HANDSET AND RINGER
- A INSPECT INSIDE WALL TELEPHONE
- A INSPECT DESK TELEPHONE
- A CLEAN AND SERVICE EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

- 0 P0872 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON PERIMETER SECURITY SYSTEMS

TASK #: 00940

TROUBLESHOOT AN/GSQ-199 COMMUNICATION CENTRAL

DUTY CODE: X0

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MAJOR, DAMAGE, INJURY

HOW OFTEN: WEEKLY

OJT TRAINABLE: NO, TECHNICALLY OF SYSTEM

QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND

TNG REFERENCE(S): QTP 304X0-30MC

TTT: 3

SME OPINION: 5

EQUIPMENT:

NO-OXIDATION GREASE, VACUUM, AIR COMPRESSOR, DC POWER SUPPLY, TOOL BAG, TELEPHONE TEST SET, FREQUENCY COUNTER, OSCILLOSCOPE, AC VACUUM TUBE VOLTMETER/DIGITAL VOLTMETER, DISTORTION ANALYZER, ISOLATION TRANSFORMER, DUMMY LOAD, 560 OHM RESISTOR, 30 VOLT VOLT POWER SUPPLY, DC POWER SUPPLY, CLEANING SUPPLIES, TOOL CHEST, PUNCH TOOL, SOLDERING EQUIPMENT

REFERENCES:

T.O. 31S9-2GSQ199-1 (OVERALL)

T.O. 31S9-2GSQ199-11 (CONSOLE)

T.O. 31S9-2GSQ199-21 (AMPLIFIER AUDIO FREQUENCY-EQUIP ROOM)

T.O. 31S9-2GSQ199-31 (RINGER GENERATION-EQUIP ROOM)

T.O. 35C3-117-1

LOCALLY DEVELOPED PMI FROM 2149CS (T.O. 31S9-2GSQ199-6WC-1)

BLUEPRINTS

CONDITIONS CUES:

COND: FIELD LOCATION, WEAPON STORAGE AREA, SECURITY CENTRAL, ALERT FACILITY, INSIDE/OUTSIDE, DAY/NIGHT, EQUIPMENT RELEASED, POWER ON, KEY TELEPHONE UNIT FAILURE, POWER OFF.

CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, AUDIO/VISUAL ALARM SOUNDS, NO AUDIO OUTPUT WHICH CAUSES DISTORTION, NO TELEPHONE RING.

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0869 2.59 7.0 13.0 13.0 5.0 6.33 7.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY COMPONENTS
- K ISOLATE FAULTY CIRCUIT CARDS
- A REMOVE/REPLACE CIRCUIT CARDS, COMPONENTS, AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:

- 0 P0869 K ISOLATE MALFUNCTIONS IN SECURITY SYSTEM VOICE COMMUNICATION SYSTEMS

TASK #: 00950
ALIGN/ADJUST AN/GSQ-199 COMMUNICATION CENTRAL
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: QUARTERLY
OJT TRAINABLE: NO, BECAUSE OF EXTREME CONSEQUENCES
QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 5
THE FOLLOWING A/A ARE DONE TO THE SYSTEM BUT NOT IN ORDER
TO A/A ONE MAJOR SUBASSEMBLY TO ANOTHER, BUT WITHIN THE
MAJOR SUBASSEMBLY.
EQUIPMENT:
AC VACUUM TUBE VOLT METER/DIGITAL VOLTMETER, FREQUENCY COUNTER,
DISTORTION ANALYZER, ISOLATION TRANSFORMER, DUMMY LOAD, 560 OHM
RESISTOR, TOOL BAG, 30 VOLT POWER SUPPLY, DC POWER SUPPLY,
OSCILLOSCOPE
REFERENCES:
T.O. 31S9-2GSQ199-1 (OVERALL)
T.O. 31S9-2GSQ199-11 (CONSOLE)
T.O. 31S9-2GSQ199-21 (AMPLIFIER AUDIO FREQUENCY-EQUIP ROOM)
T.O. 31S9-2GSQ199-31 (RINGER GENERATION-EQUIP ROOM)
T.O. 35C3-3-117-1C (LORAIN FLOTROL RECTIFIER)
CONDITIONS CUES:
COND: ALERT FACILITY, WEAPON STORAGE AREA, POWER ON, EQUIPMENT
RELEASED, INSIDE, DAY/NIGHT
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, AUDIO/VISUAL
ALARM INDICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0817 2.43 15.0 16.0 15.0 6.0 5.56 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST LORAIN FLOTROL RECTIFIER
A ALIGN/ADJUST SUB-CYCLE RINGER
A ALIGN/ADJUST AUDIO AMPLIFIER
A ALIGN/ADJUST CONSOLE
OSR JOB INVENTORY TASK STATEMENTS:
0 P0817 A ADJUST SECURITY SYSTEM COMMUNICATION CONTROL CONSOLE
COMPONENTS

TASK #: 00960
ALIGN/ADJUST AN/GSQ-199 LORAIN FLOTROL RECTIFIER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: QUARTERLY
OJT TRAINABLE: NO, BECAUSE OF EXTREME CONSEQUENCES
QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL BAG, DIGITAL MULTIMETER, OSCILLOSCOPE, POWER SUPPLY
REFERENCES:
T.O. 31S9-2GSQ199-1
T.O. 35C3-3-117-1C
CONDITIONS CUES:
COND: ALERT FACILITY, WEAPON STORAGE AREA, POWER ON, EQUIPMENT
RELEASED, INSIDE, DAY/NIGHT
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, AUDIO/VISUAL
ALARM INDICATIONS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0725 2.61 22.0 19.0 16.0 8.0 4.48 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST INPUT VOLTAGE RANGE AND FREQUENCY COMPENSATION
A ADJUST BATTERY FLOAT VOLTAGE
A ADJUST EQUALIZATION VOLTAGE
A ADJUST CURRENT LIMIT
A ADJUST OVERVOLTAGE SHUTDOWN
A ADJUST ACCESSORY LOAD SHARING
A ADJUST HIGH/LOW VOLTAGE ALARM
OSR JOB INVENTORY TASK STATEMENTS:
0 N0725 A ADJUST DIRECT CURRENT (DC) POWER SUPPLY COMPONENTS

TASK #: 00970
ALIGN/ADJUST AN/GSQ-199 SUB-CYCLE RINGER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: YEARLY
OJT TRAINABLE: NO, BECAUSE OF EXTREME CONSEQUENCES
QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL BAG, POWER SUPPLY, OSCILLOSCOPE, DIGITAL MULTIMETER,
FREQUENCY COUNTER, LOAD RESISTOR
REFERENCES:
T.O. 31S9-2GSQ199-1
T.O. 31S9-2GSQ199-31
CONDITIONS CUES:
COND: ALERT FACILITY, WEAPON STORAGE AREA, POWER ON, EQUIPMENT
RELEASED, INSIDE, DAY/NIGHT
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, AUDIO
INDICATIONS (NO RING)
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0834 2.24 10.0 14.0 12.0 5.0 5.13 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST 20 HZ VOLTAGE
A ADJUST RING BACK TONE
A ADJUST 20 HZ FREQUENCY
A ADJUST 600 FREQUENCY
A ADJUST WAVEFORM
OSR JOB INVENTORY TASK STATEMENTS:
0 P0834 A ADJUST SECURITY SYSTEM SUBCYCLE RING GENERATOR COMPO-
NENTS

TASK #: 00980
ALIGN/ADJUST AN/GSQ-199 AUDIO AMPLIFIER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: SEMIANNUAL
OJT TRAINABLE: YES
QTP ADEQUATE: NO, NOT WRITTEN SJ 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL BAG, OSCILLOSCOPE, DIGITAL MULTIMETER, DISTORTION
ANALYZER, ISOLATION TRANSFORMER, AC VOLTMETER, SIGNAL GENERATOR,
LOAD RESISTORS
REFERENCES:
T.O. 31S9-2GSQ199-1
T.O. 31S9-2GSQ199-21
CONDITIONS CUES:
COND: ALERT FACILITY, WEAPON STORAGE AREA, POWER ON, EQUIPMENT
RELEASED, INSIDE, DAY/NIGHT
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, DISTORTION OR
INCORRECT OUTPUT FROM SPEAKERS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0817 2.43 15.0 16.0 15.0 6.0 5.56 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST NEGATIVE FEEDBACK
A ADJUST BIAS CONTROL
A ADJUST OUTPUT CONTROL
OSR JOB INVENTORY TASK STATEMENTS:
0 P0817 A ADJUST SECURITY SYSTEM COMMUNICATION CONTROL CONSOLE
COMPONENTS

TASK #: 00990
ALIGN/ADJUST AN/GSQ-199 CONSOLE
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: SEMIANNUAL
OJT TRAINABLE: YES
QTP ADEQUATE: NO, NOT WRITTEN SO 304X0 CAN UNDERSTAND
TNG REFERENCE(S): QTP 304X0-30MC
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BAG
REFERENCES:
T.O. 31S9-2GSQ199-1
T.O. 31S9-2GSQ199-11
CONDITIONS CUES:
COND: ALERT FACILITY, WEAPON STORAGE AREA, POWER ON, EQUIPMENT
RELEASED, INSIDE, DAY/NIGHT
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, LAMP LEVEL DIM
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0817 2.43 15.0 16.0 15.0 6.0 5.56 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST BRIGHTNESS LIMIT CONTROL
OSR JOB INVENTORY TASK STATEMENTS:
0 P0817 A ADJUST SECURITY SYSTEM COMMUNICATION CONTROL CONSOLE
COMPONENTS

TASK #: 01000
INSPECT AN/GSS-26A MAGNETIC ANTI-INTRUSION DETECTION/MAGNETIC INTRUSION LINE SENSOR (MAID/MILES)
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: 84
OJT TRAINABLE: YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X0-30MA
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, TOOL BAG, SHOVELS
REFERENCES:
T.O. 2149IIS-31S9-2GSS26-17 (LOCAL WORK CARD)
T.O. 31S9-2GSS26-17
T.O. 31S9-2GSS26-17-1
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITY, EQUIPMENT RELEASED, OUTSIDE, DAY/NIGHT
CUE: SCHEDULED PMI, QC EVAL, ALARM GOES ON ANNUNCIATOR SYSTEM
AN/GSS-26A IS CONNECTED TO, OUTSIDE, DAY/NIGHT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0872 2.67 27.0 25.0 22.0 10.0 4.68 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK BATTERY COVER
OSR JOB INVENTORY TASKS:
0 P0872 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
PERIMETER SECURITY SYSTEMS

TASK #: 01010
TROUBLESHOOT AN/GSS-26A MAGNETIC ANTI-INTRUSION DETECTION MAGNETIC INTRUSION LINE SENSOR (MAID/MILES)
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: EVERY TWO YEARS
OJT TRAINABLE: YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X0-30MA
TTT: 3 OR 5
SME OPINION: 3 OR 5
EQUIPMENT:
PICKUP ASSEMBLY KIT, ANNUNCIATOR, ATTENUATOR, DC POWER SUPPLY,
FUNCTION GENERATOR, LEAK DETECTOR, OSCILLOSCOPE, DIGITAL
MULTIMETER, TOOL KIT, VEHICLE, SHOVELS, PICKS, SHIELDING STRIPS,
CABLE LOCATORS, OHM METER, SPLICE KIT, TROWEL, SITE KIT,
SOLDERING KIT
REFERENCES:
T.O. 31S9-2GSS26-17
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITY, EQUIPMENT RELEASED,
OUTSIDE, DAY/NIGHT
CUE: PMI FINDINGS, ALARM INDICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0861 2.54 9.0 12.0 11.0 4.0 5.54 7.0
ACTIVITIES SKILL KNOWLEDGE:
K APPLY THEORY OF TRANSPOSITION POINTS
K ISOLATE FAULTY CABLES
K ISOLATE FAULTY BATTERY
A REMOVE/REPLACE MAID UNIT, LINE SENSOR, BATTERY OR
PARTS
OSR JOB INVENTORY TASK STATEMENTS:
0 P0861 K ISOLATE MALFUNCTIONS IN SECURITY SYSTEM SEISMIC SENSOR
SYSTEMS

TASK #: 01020
ALIGN/ADJUST AN/GSS-26A MAGNETIC INTRUSION LINE SENSOR (MILES)
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: INDEFINITE, MAY NEVER HAVE TO ADJUST. E&I USUALLY DOES INITIAL INSTALLATION AND UPGRADING.
OJT TRAINABLE: YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X0-30MA
TTT: 5
SME OPINION: 5
EQUIPMENT:
TUNING ROD, SHOVELS, TOOL BAG, SITE KIT, MAGNET SLED
REFERENCES:
T.O. 31S9-2GSS26-17
CONDITIONS CUES:
COND: WEAPON STORAGE, ALERT FACILITY, OUTSIDE, FAVORABLE WEATHER, EQUIPMENT RELEASED, DAYLIGHT
CUE: RECOGNIZE TRENDS, ALARMS SOUNDING, OUTSIDE INTERFERENCE BASED ON KNOWLEDGE AND CAPABILITIES OF AN/GSS-26A SYSTEM.
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0816 2.35 21.0 21.0 19.0 8.0 5.39 7.0
304X0 P 0827 2.13 12.0 17.0 15.0 7.0 5.04 7.0
ACTIVITIES SKILL KNOWLEDGE:
A TUNE MILES CABLE TO REMOVE ELECTRO-MAGNETIC INTERFERENCE
OSR JOB INVENTORY TASK STATEMENTS:
0 P0816 A ADJUST SECURITY SYSTEM AREA SENSOR SYSTEM COMPONENTS
0 P0827 A ADJUST SECURITY SYSTEM LINE SENSOR SYSTEM COMPONENTS

TASK #: 01030
INSPECT AN/GSS-37 MICROWAVE FENCE SENSOR
DUTY CODE:
TASK STATUS: 3-OJT
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28, 84, 168
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S9-4-54-1 AND
T.O. 2149CS-AN/GSS-37-6WC-1 (LOCAL WORK CARD)
TTT: 3
SME OPINION: 3
EQUIPMENT:
CLEANING SUPPLIES (RAG, GLASS CLEANER), LADDER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31S9-4-54-1
CONDITIONS CUES:
COND: ALERT FACILITY, WEAPON STORAGE, OUTSIDE, LOCATED ABOVE /BETWEEN FENCES, FAVORABLE WEATHER CONDITION, EQUIPMENT RELEASED, POWER ON
CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATIONS, ALARM INDICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0872 2.67 27.0 25.0 22.0 10.0 4.68 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
0 P0872 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON PERIMETER SECURITY SYSTEMS

TASK #: 01040
TROUBLESHOOT AN/GSS-37 MICROWAVE FENCE SENSOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: YEARLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S9-4-54-1 AND
T.O. 2149CS-AN/GSS-37-6WC-1 (LOCAL WORK CARD)
TTT: 5
SME OPINION: 5
EQUIPMENT:
STORAGE OSCILLOSCOPE, DIGITAL MULTIMETER, MICROWAVE PULSE
COUNTER, FEED HORN, MICROWAVE DETECTOR, SIGNAL GENERATOR.
ANALOG VOLTMETER, FREQUENCY COUNTER, DECADE BOX, STEP
ATTENUATOR 0-120DB AND 0-12 DB, TOOL BAG, LADDER,
SOLDERING KIT
REFERENCES:
T.O. 31S9-4-54-1
T.O. 2149CS-AN/GSS-37-6WC-1 (LOCALLY GENERATED PMI)
CONDITIONS CUES:
COND: ALERT FACILITY, WEAPON STORAGE, OUTSIDE, LOCATED ABOVE
/BETWEEN FENCES, FAVORABLE WEATHER CONDITION, EQUIPMENT
RELEASED, POWER ON
CUE: PMI FINDINGS, ALARM INDICATORS, QUALITY CONTROL
EVALUATIONS, WEATHER COMPLICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0845 2.65 9.0 8.0 8.0 6.0 6.06 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES (ANTENNAS) AND COMPO-
NENTS
A REMOVE/REPLACE SUBASSEMBLIES (ANTENNAS), COMPONENTS,
AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
0 P0845 K ISOLATE MALFUNCTIONS IN MICROWAVE FENCE SYSTEMS

TASK #: 01050
ALIGN/ADJUST AN/GSS-37 MICROWAVE FENCE SENSOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: YEARLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S9-4-54-1 AND
T.O. 2149CS-AN/GSS-37-6WC-1 (LOCAL WORK CARD)
TTT: 5
SME OPINION: 5
EQUIPMENT:
STORAGE OSCILLOSCOPE, DIGITAL MULTIMETER, MICROWAVE PULSE
COUNTER, FEED HORN, MICROWAVE DETECTOR, SIGNAL GENERATOR.
ANALOG VOLTMETER, FREQUENCY COUNTER, DECADE BOX, STEP
ATTENUATOR 0-120DB AND 0-12 DB, TOOL BAG, LADDER
REFERENCES:
T.O. 31S9-4-54-1
T.O. 2149CS-AN/GSS-37-6WC-1 (LOCALLY GENERATED PMI)
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITIES, EQUIPMENT
RELEASED, POWER ON, DAY
CUE: PMI FINDINGS, ALARM INDICATIONS, QUALITY CONTROL
EVALUATION
JOB STANDARDS:
IAW REFERENCES

4

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0840 2.00 10.0 8.0 7.0 4.0 6.58 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A ALIGN TRANSMITTER WITH RECEIVER
- A ADJUST DETECTION SENSITIVITY
- A ALIGN AUTOMATIC GAIN CONTROL
- A ALIGN MULTIPATH
- A ADJUST TRANSMITTER CURRENT REGULATOR
- A ADJUST RELATIVE POWER OUTPUT
- A ADJUST MODULATION FREQUENCY
- A ADJUST PHASE LOCK LOOP

OSR JOB INVENTORY TASK STATEMENTS:

0 P0840 A ALIGN SECURITY SYSTEM ANTIPERSONNEL RADAR SYSTEMS

TASK #: 01060

INSPECT AN/GSS-39 COMMERCIAL SENSORS

DUTY CODE: X0

TASK STATUS: 3-OJT

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: 168

OJT TRAINABLE: YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): LWC 2149CS INFRARED, 6 APRIL 88,
LWC 2149CS PROTECH, 6 APRIL 88, AND
COMMERCIAL MANUALS (PROTECH AND SUPER-RED
SR-2000)

TTT: 3

SME OPINION: 3

EQUIPMENT:

LADDER, TOOL BAG, CLEANING SUPPLIES (SOLVENT, RAGS)

REFERENCES:

LWC 2149CS INFRARED, 6 APRIL 88

LWC 2149CS PROTECH, 6 APRIL 88

COMMERCIAL MANUALS (PROTECH AND SUPER-RED SR-2000)

CONDITIONS CUES:

COND: ALERT FACILITY, WEAPON STORAGE AREA, DAY/NIGHT, INSIDE,
EQUIPMENT RELEASED, POWER ON/OFF

CUE: LOCALLY SCHEDULED PMI, QUALITY CONTROL EVALUATION

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0873 2.30 11.0 8.0 7.0 4.0 4.43 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CHECK TAMPER SWITCH OPERATION
- A CHECK BATTERIES INSIDE JUNCTION BOX
- K PERFORM CLEANING
- K PERFORM OPS CHECK ON STEREO DOPPLER MICROWAVE INTRUDER DETECTOR (PROTECH)

OSR JOB INVENTORY TASK STATEMENTS:

0 P0873 A PERFORM PMI ON SECURITY SYSTEM ANTIPERSONNEL RADAR SYSTEMS

TASK #: 01070
TROUBLESHOOT AN/GSS-39 COMMERCIAL SENSORS
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LWC 2149CS INFRARED, 6 APRIL 88,
LWC 2149CS PROTECH, 6 APRIL 88, AND
COMMERCIAL MANUALS (PROTECH AND SUPER-RED
SR-2000)
TTT: 5
SME OPINION: 5
UNTIL T.O. BECOMES AVAILABLE AND BISS HAS REPAIR AUTHORITY FOR
THE SUPER-RED SR-2000, PROTECH, AND JUNCTION BOX, REMOVE/
REPLACE ACTIVITIES CAN ONLY ASSUMED. TO WHAT LEVEL AND WHO
HAS RESPONSIBILITY FOR REPAIR? BISS HAS HAD THIS SYSTEM SINCE
1JULY86. WARRANTY EXPIRES MAY 89. APPROX 10 PROTECHS RETURNED
TO CONTRACTOR, ONLY ON SUPER-RED R/R. ONLY 1 CIRCUIT CARD
R/R.
EQUIPMENT:
TOOL BAG, LADDER, DIGITAL MULTIMETER
REFERENCES:
LWC 2149CS INFRAED, 6 APRIL 88
LWC 2149CS PROTECH, 6 APRIL 88
COMMERCIAL MANUALS (PROTECH AND SUPER-RED SR-2000)
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITY, POWER ON, EQUIPMENT
RELEASED
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, AUDIO/VISUAL
ALARMS AT ANNUNCIATOR
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0858 2.33 8.0 11.0 11.0 5.0 6.70 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ISOLATE FAULTY CIRCUIT BOARDS
A ISOLATE FAULTY MINOR PARTS (FUSES, WIRING)
A REMOVE/REPLACE PROTECH, SUPER-RED SR-2000
(VISIONICS), CIRCUIT CARDS (SEE SPECIAL NOTE ABOVE)
OSR JOB INVENTORY TASK STATEMENTS:
0 P0858 K ISOLATE MALFUNCTIONS IN SECURITY SYSTEM MICROWAVE

TASK #: 01080
ALIGN/ADJUST AN/GSS-39 COMMERCIAL SENSORS
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): COMMERCIAL MANUAL (PROTECH) AND
COMMERCIAL MANUAL FOR SR-2000
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BAG, LADDER, DIGITAL MULTIMETER
REFERENCES:
COMMERCIAL MANUAL (PROTECH)
COMMERCIAL MANUAL FOR SR-2000
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITY, POWER ON, EQUIPMENT
RELEASED
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, AUDIO/VISUAL
ALARM INDICATIONS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0820 2.24 11.0 14.0 14.0 6.0 6.32 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A ADJUST SENSITIVITY
- A ADJUST RANGE
- A ADJUST VERTICAL/HORIZONTAL POSITIONING OF PROTECH
- A ADJUST COVERAGE AREA
- A ADJUST LENS
- A ADJUST AGASTAT TIMER RELAY SWITCH

OSR JOB INVENTORY TASK STATEMENTS:

- 0 P0820 A ADJUST SECURITY SYSTEM DOPPLER SENSOR SYSTEM COMPONENTS

TASK #: 01090

INSPECT AN/GXS-2 PERIMETER SURVEILLANCE SYSTEM

DUTY CODE: X0

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: 84, 168, ANNUALLY

OJT TRAINABLE: YES

QTP ADEQUATE: YES

QTP REFERENCE(S): QTP 304X0-30MB

TTT: 3

SME OPINION: 3

EQUIPMENT:

CLEANING SUPPLIES (VACUUM CLEANER, GLASS CLEANER, AND RAGS),
TOOL BAG, STRAIGHT EXTENDER CARD, OFFSET EXTENDER CARD,
DIGITAL MULTIMETER, OSCILLOSCOPE, MINI-POMONA TEST CLIP
PRESSURE GAUGE, COUNTERBALANCE KIT, ANTI-FREEZE

REFERENCES:

- T.O. 31S9-2GXS2-6WC-1
- T.O. 31S9-2GXS2-2
- T.O. 31S9-2GXS2-1
- T.O. 31S9-2G-201
- T.O. 31S9-2G-211
- T.O. 31S9-2G-221
- T.O. 31S9-G2-231
- T.O. 31S9-4-46-1
- T.O. 31S9-4-47-7

CONDITIONS CUES:

COND: ALERT FACILITY, WEAPON STORAGE AREA, OUTSIDE
DAY, FAVORABLE WEATHER (NOT WINDY)

CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 P 0874 2.59 20.0 22.0 19.0 7.0 4.97 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A PERFORM OPERATIONAL CHECK
- A CHECK POWER SUPPLIES OUTPUT
- A CHECK INPUT VIDEO SIGNAL
- A CHECK VIDEO AND OUTPUT LEVELS OF SWITCHING MATRIX
CARDS
- A CHECK COMMON MODE NOISE LEVEL
- A SERVICE ANTI-FREEZE

OSR JOB INVENTORY TASK STATEMENTS:

- 0 P0874 A PERFORM PMI ON TELEVISION SECURITY SYSTEMS

TASK #: 01100
TROUBLESHOOT AN/GXS-2 PERIMETER SURVEILLANCE SYSTEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X0-30MB
TTT: 3
SME OPINION: 3 LEVEL TO LRU AND 5 LEVEL TO COMPONENT
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, TOOL CHEST, AN/GXM-1 TEST
SET, TELEVISION MONITOR, SYNC GENERATOR, BAR-DOT GENERATOR,
SOLDERING KIT, WRIST STRAP, GROUNDING PROB
REFERENCES:
T.O. 31S9-2G-211
T.O. 31S9-2GXS2-6WC-1
T.O. 31S9-2GXS2-2
T.O. 31S9-2GXS2-1
T.O. 31S9-G2-231
T.O. 31S9-2G-221
T.O. 31S9-2G-201
T.O. 31S9-4-44-1 (GXM-1 TEST SET)
T.O. 31S9-4-46-1
T.O. 31S9-4-47-7
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITY, INSIDE, OUTSIDE, DAY,
NIGHT, POWER ON/OFF, BISS SHOP, HIGH VOLTAGE HAZARD,
EQUIPMENT ON-LINE/RELEASED
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, ALARM AND LIGHT
INDICATIONS, DISPLAY ON MONITOR DISTORTED, NO PICTURE,
SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE IJOB IENL 5SKL 7SKL TD ATI
304X0 P 0865 2.57 15.0 19.0 17.0 7.0 6.65 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CONTROL-INDICATOR ASSEMBLY
K ISOLATE FAULTY CONTROL MONITOR UNIT
K ISOLATE FAULTY MONITOR TELEVISION
K ISOLATE FAULTY CAMERA SET TELEVISION
K ISOLATE FAULTY LINE REPLACEABLE UNITS (LRU)
K ISOLATE FAULTY INDIVIDUAL COMPONENTS
A REMOVE/REPLACE LINE REPLACEABLE UNITS, COMPONENTS,
AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
0 P0865 K ISOLATE MALFUNCTIONS IN SECURITY SYSTEM TELEVISION
CAMERAS

TASK #: 01110
ALIGN/ADJUST AN/GXS-2 PERIMETER SURVEILLANCE SYSTEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 168, AS REQUIRED
OJT TRAINABLE: YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X0-30MB
TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL BAG, DIGITAL MULTIMETER, OSCILLOSCOPE, COMMON MODE
GENERATOR,
REFERENCES:
T.O. 31S9-2G-201
T.O. 31S9-2G-211
T.O. 31S9-2G-221
T.O. 31S9-2G-231
CONDITIONS CUES:
COND: WEAPON STORAGE AREA, ALERT FACILITY, INSIDE, POWER ON,
BISS SHOP
CUE: PMI FINDINGS, AFTER ANY MAINTENANCE IS DONE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0725 2.61 22.0 19.0 16.0 8.0 4.48 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST CONTROL-INDICATOR ASSEMBLY BACK LIGHT DIMMER
CONTROL
A ADJUST SWITCHING UNIT VIDEO MATRIX POWER SUPPLY,
VIDEO SWITCHES, AND OUTPUT AMPLIFIER
A ADJUST AMPLIFIER UNIT VIDEO SIGNAL EQUALIZERS AND
POWER SUPPLY
A ADJUST CONTROL-MONITOR UNIT, VOLTAGE REGULATORS LAMP
DIMMER, VIDEO PRESENCE DETECTOR, AND POWER SUPPLY
OSR JOB INVENTORY TASK STATEMENTS:
0 N0725 A ADJUST DIRECT CURRENT (DC) POWER SUPPLY COMPONENTS

TASK #: 01120
ALIGN/ADJUST AN/GXS-2 CAMERA SET TELEVISION
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 168
OJT TRAINABLE: YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X0-30MB
TTT: 3
SME OPINION: 5
EQUIPMENT:
TRANSFORMER 0-140 VOLT, AMMETER, DIGITAL MULTIMETER,
OSCILLOSCOPE, TOOL CHEST, ALIGNMENT BENCH, TELEVISION MONITOR
REFERENCES:
T.O. 31S9-4-46-1
CONDITIONS CUES:
COND: BISS SHOP, INSIDE, DAY/NIGHT, EQUIPMENT RELEASE, POWER
ON
CUE: PMI FINDINGS, AFTER ANY MAINTENANCE IS DONE ON SWITCHING
UNIT VIDEO MATRIX
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 T 1403 1.63 13.0 14.0 13.0 5.0 6.04 2.0

ACTIVITIES SKILL KNOWLEDGE:

- A ADJUST POWER SUPPLY
- A ADJUST VIDICON POSITION
- A ADJUST LIGHT LEVEL
- A ADJUST TARGET VOLTAGE
- A ADJUST MESH, BEAM CURRENTS
- A ADJUST PEDESTAL
- A ADJUST HORIZONTAL AND VERTICAL SIZE
- A ADJUST HORIZONTAL AND VERTICAL CENTERING
- A ADJUST ELECTRICAL FOCUS
- A ADJUST SYNC AMPLITUDE
- A ADJUST WHITE CLIPPER
- A ADJUST LENS LEVEL
- A ADJUST BACK FOCUS

OSR JOB INVENTORY TASK STATEMENTS:

0 T1403 A ALIGN CAMERA CIRCUITS

TASK #: 01130

ALIGN/ADJUST AN/GXS-2 MONITOR TELEVISION

DUTY CODE: X0

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: 168, AS REQUIRED

OJT TRAINABLE: YES

QTP ADEQUATE: YES

QTP REFERENCE(S): QTP 304X0-30MB

TTT: 3

SME OPINION: 5

EQUIPMENT:

TOOL CHEST, BAR-DOT GENERATOR, SYNC GENERATOR, OSCILLOSCOPE,
DIGITAL MULTIMETER

REFERENCES:

T.O. 31S9-4-47-7

CONDITIONS CUES:

COND: BISS SHOP, INSIDE, DAY/NIGHT, POWER ON, EQUIPMENT
RELEASED

CUE: PMI FINDINGS, AFTER ANY MAINTENANCE IS DONE ON SWITCHING
UNIT VIDEO MATRIX

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 T 1401 1.48 10.0 12.0 12.0 5.0 5.44 2.0

ACTIVITIES SKILL KNOWLEDGE:

- A ADJUST SCAN SIZE
- A ADJUST HORIZONTAL AND VERTICAL LINEARITY
- A ADJUST HORIZONTAL OSCILLATOR FREQUENCY RANGE
- A ADJUST VERTICAL OSCILLATOR FREQUENCY RANGE
- A ADJUST WIDTH
- A ADJUST VERTICAL SIZE
- A ADJUST FOCUS
- A ADJUST VIDEO AND SYNC GAIN
- A ADJUST CRT GRID VOLTAGE
- A ADJUST ANTI-RINGING PRINTED WIRE ASSEMBLY
- A ADJUST ANTI-RINGING CIRCUIT

OSR JOB INVENTORY TASK STATEMENTS:

0 T1401 A ADJUST VIDEO DISPLAY MONITORS

TASK #: 01140
INSPECT HD-674(P)/G LOW SPEED MODEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 84
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NOT USED
TNG REFERENCE(S): T.O. 31W2-2G-46WC-1 AND T.O. 31W2-2G-41
TTT: 5
SME OPINION: 3
EQUIPMENT:
FREQUENCY COUNTER, LEVEL METER, DIGITAL VOLTMETER, OSCILLOSCOPE
REFERENCES:
T.O. 31W2-2G-46WC-1
T.O. 31W2-2G-41
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT BYPASSED
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 S 1389 1.74 6.0 10.0 9.0 9.0 4.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A REMOVE AND CLEAN FILTER
A CHECK POWER SUPPLY VOLTAGES
A CHECK MODEM MARK AND SPACE FREQUENCIES
A CHECK MODEM BAUD RATE
A CHECK MODEM TIMING SIGNALS
A CHECK MODEM TRANSMIT AND RECEIVE DATA
OSR JOB INVENTORY TASK STATEMENTS:
0 S1389 A VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF
INSTALLED EQUIPMENT

TASK #: 01150
TROUBLESHOOT MD-674(P)/G LOW SPEED MODEM TO COMPONENT LEVEL
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: SIX MONTHS OR YEARLY
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS,
FREQUENCY SHIFT KEYING, DIGITAL TECHNIQUES
QTP ADEQUATE: NOT USED
TNG REFERENCE(S): T.O. 31W2-2G-46WC-1 AND T.O. 31W2-2G-41
TTT: 5
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, OSCILLOSCOPE, DIGITAL MULTIMETER, LEVEL METER,
HAND TOOLS, SOLDERING EQUIPMENT
REFERENCES:
T.O. 31W2-2G-46WC-1
T.O. 31W2-2G-41
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT BYPASSED, CIRCUIT CARD ON BENCH
CUE: TECH CONTROL COMPLAINT, RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1035 2.93 13.0 16.0 15.0 11.0 5.49 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM LOOPBACK TEST
K ISOLATE FAULT TO SEND OR RECEIVE SIDE
K ISOLATE TO CIRCUIT CARD OR SUBASSEMBLY USING HALF
SPLIT METHOD AND BLOCK DIAGRAMS
K ISOLATE TO CIRCUIT CARD COMPONENT USING SCHEMATICS
A REMOVE AND REPLACE MODULES, CIRCUIT CARDS, AND COMPO-
NENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1035 K ISOLATE HALFUNCTIONS IN SOLID-STATE AUDIO AMPLIFIERS

TASK #: 01160
INSPECT THE MD-701 DIGITAL DATA MODEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 14, 50
OJT TRAINABLE: YES, NO, ELECTRONIC PRINCIPLES, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S5-4-90-6WC-1 AND T.O. 31S5-4-90-2
TTT: 3
SME OPINION: 3
EQUIPMENT:
MULTIMETER, OSCILLOSCOPE, VACUUM TUBE VOLTMETER
REFERENCES:
T.O. 31S5-4-90-6WC-1
T.O. 31S5-4-90-2
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, EQUIPMENT FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0802 2.43 11.0 7.0 5.0 3.0 4.52 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATION CHECKS
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
OSR JOB INVENTORY TASK STATEMENTS:
0 00802 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
DC TO AUDIO FSK MODEMS

TASK #: 01170
ALIGN ADJUST MD-701 DIGITAL DATA MODEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO, ELECTRONIC PRINCIPLES, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S5-4-90-6WC-1 AND T.O. 31S5-4-90-6WC-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, BITE, VACUUM TUBE VOLTMETER
REFERENCES:
T.O. 31S5-4-90-6WC-1
T.O. 31S5-4-90-2
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI FAILURE, OUT OF TOLERANCE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0981 2.50 22.0 22.0 22.0 16.0 4.76 7.0
ACTIVITIES SKILL KNOWLEDGE:
A MEASURE AND ALIGN DC OUTPUT VOLTAGE
A MEASURE AND ADJUST TRANSMIT OUTPUT LEVEL
A MEASURE AND ADJUST RECEIVE LEVEL
A ADJUST OUTPUT OF LIMITER DISCRIMINATOR
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0981 A ADJUST GENERAL PURPOSE POWER SUPPLY COMPONENTS

TASK #: 01180
TROUBLESHOOT THE MD-701 DIGITAL DATA MODEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO, ELECTRONIC PRINCIPLES, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S5-4-90-2
TTT: 3
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, CIRCUIT TESTER, VACUUM TUBE
VOLTMETER, BITE
REFERENCES:
T.O. 31S5-4-90-2
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: USER COMPLAINT, PMI RESULTS, EQUIPMENT FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 0 0794 3.09 14.0 12.0 10.0 6.0 6.72 11.0
ACTIVITIES SKILL KNOWLEDGE:
A MEASURE INPUT SIGNAL
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A MEASURE OUTPUT SIGNAL
K ISOLATE FAULTY COMPONENT
A REMOVE AND REPLACE CIRCUIT CARDS
A REMOVE AND REPLACE CIRCUIT CARD COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 00794 K ISOLATE MALFUNCTIONS IN DIGITAL MODEMS

TASK #: 01190
INSPECT MDR-8-5N QUAD DIVERSITY MICROWAVE DIGITAL RADIO
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL
MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N QUAD
DIVERSITY MICROWAVE DIGITAL RADIO
TTT: 3
SME OPINION: 3
EQUIPMENT:
VACUUM CLEANER, SOFT BRISTLE BRUSH, ELECTROSTATIC DISCHARGE
STRAP, LOW VELOCITY BLOWER
REFERENCES:
ROCKWELL INTERNATIONAL MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N
QUAD DIVERSITY MICROWAVE DIGITAL RADIO
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 L 0567 1.96 5.0 5.0 5.0 5.0 4.43 7.0
304X0 K 0418 4.04 18.0 20.0 17.0 10.0 4.22 11.0
304X0 K 0420 4.52 50.0 39.0 35.0 17.0 4.84 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN INTERIOR/EXTERIOR OF EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
0 K0418 A PERFORM PMI ON DIGITAL RECEIVERS
0 K0420 A PERFORM PMI ON FM RECEIVERS

TASK #: 01200
OPERATIONALLY CHECK MDR-8-5N QUAD DIVERSITY MICROWAVE DIGITAL RADIO
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 84
OJT TRAINABLE: YES, NO, THEORY OF RADIO OPERATION, SAFETY, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL
MDR-8-5N/MDR-11-5N/MDR-12--5 MDR-8-5N
QUAD DIVERSITY MICROWAVE DIGITAL RADIO
TTT: 5
SME OPINION: 5
REFERENCES:
ROCKWELL INTERNATIONAL MDR-8-5N/MDR-11-5N/MDR-12-5
MDR-8-5N QUAD DIVERSITY MICROWAVE DIGITAL RADIO
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0187 4.63 36.0 32.0 29.0 17.0 3.29 12.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK FOR MODULE ALARM INDICATIONS
A CHECK THAT ALL MODULES AND CONNECTORS ARE PROPERLY SEATED
A CHECK CARRIER FREQUENCIES FROM STATION LICENSE
A VERIFY RECEIVE/TRANSMIT CRYSTAL FREQUENCIES ARE WITHIN CALCULATED FREQUENCY PARAMETERS
A ADJUST RECEIVER/TRANSMITTER PHASE LOCK VOLTAGES
A CHECK AUXILIARY CHANNEL INSERT CLOCK MONITOR
A CHECK DS-3 INTERFACE SHELF CLOCK MONITOR
A CHECK INPUT RATE CONVERTER CLOCK MONITORS
A CHECK MASTER CLOCK FREQUENCIES
A CHECK TWT HIGH VOLTAGE POWER SUPPLY
A CHECK TRAVELING WAVE TUBE (TWT) POWER SUPPLY HELIX CURRENT AND BEAM CURRENT
A CHECK TWT RF POWER OUTPUT
A CHECK TRANSMITTER POWER INDICATORS
A CHECK VOLTAGE REGULATORS OUTPUT
A VERIFY SYSTEM DATA TRANSMISSION
A VERIFY TRANSMITTER AND RECEIVER SYSTEM SWITCHING
OSR JOB INVENTORY TASK STATEMENTS:
0 G0187 A PERFORM TRANSMISSION LEVEL TESTS

TASK #: 01210
CALIBRATE MDR-8-5N TRANSMIT SECTION ALARM DISPLAY
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL
MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N QUAD DIVERSITY MICROWAVE DIGITAL RADIO
TTT: 5
SME OPINION: 3
EQUIPMENT:
HANDTOOLS
REFERENCES:
ROCKWELL INTERNATIONAL MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N QUAD DIVERSITY MICROWAVE DIGITAL RADIO
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: ALARM DISPLAY READING OUT OF T.O. SPECIFICATIONS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0963 2.26 17.0 19.0 14.0 7.0 5.19 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST TRANSMIT, POWER AMPLIFIER, AND COMBINER VOLTAGES
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0963 A ADJUST AUTOMATIC FAULT SENSING AND SWITCHING NETWORK COMPONENTS

TASK #: 01220
ADJUST MDR-8-5N DOWNCONVERTER AND ALARM RECEIVE VOLTAGE LEVELS
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO, THEORY OF MODULATION AND AMPLIFICATION
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL
MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N
QUAD DIVERSITY MICROWAVE DIGITAL RADIO
TTT: 5
SME OPINION: 3
EQUIPMENT:
ELECTROSTATIC DISCHARGE STRAP, DIGITAL MULTIMETER, FREQUENCY COUNTER, SPECTRUM ANALYZER, OSCILLOSCOPE, POWER METER, BIT ERROR RATE TESTER
REFERENCES:
ROCKWELL INTERNATIONAL MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N
QUAD DIVERSITY MICROWAVE DIGITAL RADIO
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: ALARM DISPLAY READING OUT OF T.O. SPECIFICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 0970 2.87 14.0 12.0 10.0 8.0 4.93 11.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST DOWNCONVERTER LOCAL OSCILLATOR DRIVE LEVEL CONTROL VOLTAGE
A CHECK DOWNCONVERTER LOCAL OSCILLATOR DRIVE VOLTAGE AND ADJUST ALARM DISPLAY
A ADJUST RECEIVE SIGNAL LEVEL ALARM LEVEL CONTROL
A ADJUST SWITCH CONTROL THRESHOLD VOLTAGE LEVELS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q0970 A ADJUST BUILT-IN TEST EQUIPMENT (BITE) COMPONENTS

TASK #: 01230
TROUBLESHOOT MDR-8-5N TO MODULE OR COMPONENT LEVEL
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: TWO MONTHS
OJT TRAINABLE: YES, NO, THEORY OF MODULATION AND AMPLIFICATION, TEST EQUIPMENT, THEORY OF MICROWAVE RADIO OPERATION, SAFETY PROCEDURES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ROCKWELL INTERNATIONAL
MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N QUAD DIVERSITY MICROWAVE DIGITAL RADIO
TTT: 5
SME OPINION: 5
EQUIPMENT:
ELECTROSTATIC DISCHARGE STRAP, DIGITAL MULTIMETER, FREQUENCY COUNTER, SPECTRUM ANALYZER, OSCILLOSCOPE, POWER METER
REFERENCES:
ROCKWELL INTERNATIONAL MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N QUAD DIVERSITY MICROWAVE DIGITAL RADIO
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT MAY BE RELEASED
CUE: VISUAL FAULT ALARMS, USER COMPLAINT, AUTOMATIC MASTER STATION ALARM REPORT

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0218 4.30 46.0 42.0 39.0 25.0 5.82 12.0

ACTIVITIES SKILL KNOWLEDGE:

A CHECK FAULT ALARMS WITH TROUBLESHOOTING MATRIX AND

FLOW CHART

A LOCATE INDICATED MODULE OR COMPONENT

A PERFORM OPERATIONAL CHECKS OR INPUT/OUTPUT CHECKS

INDICATED BY TROUBLESHOOTING MATRIX AND FLOW CHART

OSR JOB INVENTORY TASK STATEMENTS:

0 I0218 K ISOLATE MALFUNCTIONS IN SYSTEMS TO SPECIFIC EQUIPMENT

TASK #: 01240

REMOVE AND REPLACE MDR-8-5N MODULES OR COMPONENTS

DUTY CODE: X0

TASK STATUS: 3R-KP

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: TWO MONTHS

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): ROCKWELL INTERNATIONAL

MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N QUAD

DIVERSITY MICROWAVE DIGITAL RADIO

TTT: 3

SME OPINION: 3

EQUIPMENT:

HANDTOOLS

REFERENCES:

ROCKWELL INTERNATIONAL MDR-8-5N/MDR-11-5N/MDR-12-5 MDR-8-5N

QUAD DIVERSITY MICROWAVE DIGITAL RADIO

CONDITIONS CUES:

COND: ON EQUIPMENT, RF AND HIGH VOLTAGE HAZARDS

CUE: RESULT OF TROUBLESHOOTING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I C236 3.04 40.0 40.0 40.0 26.0 3.60 12.0

ACTIVITIES SKILL KNOWLEDGE:

A ATTACH ELECTROSTATIC GROUNDING STRAP FOR APPLICABLE
MODULES

A TURN OFF APPLICABLE CIRCUIT BREAKER

A REFER TO MODULE REPLACEMENT MATRIX FOR OPERATIONAL
CHECKS TO BE ACCOMPLISHED AFTER MODULE REPLACEMENT

A REMOVE CABLES OR RIGID COAXIAL CONNECTORS

A REMOVE AND REPLACE MODULE OR COMPONENT

OSR JOB INVENTORY TASK STATEMENTS:

0 I0236 A REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER
THAN SOLDERING

TASK #: 01250
INSPECT AN/TRC-170 V2 TRANSPORTABLE LOS/TROPO SYSTEM
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 7, 14, 28, 56, 168
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-2TRC170-16WC-1 AND T.O. 2-2TRC170-6WC-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
CLEANING SUPPLIES, HANDTOOLS, SIGNAL NOISE GENERATOR,
FIELD WIRE, GM LOOPBACK
REFERENCES:
T.O. 2-2TRC170-16WC-1
T.O. 2-2TRC170-6WC-1
CONDITIONS CUES:
COND. OUTDOORS
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 I 0248 3.33 36.0 29.0 29.0 20.0 3.68 11.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN EQUIPMENT
A CHECK FREQUENCY-SYNTHESIZER
A CHECK RECEIVER NOISE FIGURE
A CHECK GAIN EQUALIZATION
A SETUP TROPOSCATTER MODEM MODULATOR
A CHECK ALARM MONITORS
A CHECK ORDERWIRE OPERATION
A CHECK REMOTE ORDERWIRE CONTROL UNIT OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
0 I0248 A REPLACE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING METHODS OTHER THAN SOLDERING

TASK #: 01260
TROUBLESHOOT AN/TRC-170 V2 TRANSPORTABLE LOS/TROPO SYSTEM
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: ? (AS REQUIRED)
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-2TRC170-1-4 AND T.O. 2-2TRC170-1-5
TTT: 5
SME OPINION: 5
EQUIPMENT:
HANDTOOLS, MULTIMETER, POWER METER, SIGNAL GENERATOR, SOLDERING EQUIPMENT
REFERENCES:
T.O. 2-2TRC170-1-4
T.O. 2-2TRC170-1-5
CONDITIONS CUES:
COND: OUTDOORS
CUE: USER COMPLAINT, RESULT OF PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 Q 1026 2.76 30.0 24.0 19.0 12.0 5.73 11.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLY USING FAULT ALARM MONITOR
K ISOLATE FAULTY LRU OR CIRCUIT CARD USING FLOWCHARTS
A REMOVE/REPLACE SUBASSEMBLIES, LINE REPLACEABLE UNITS, OR CIRCUIT CARDS
OSR JOB INVENTORY TASK STATEMENTS:
0 Q1026 K ISOLATE MALFUNCTIONS IN MAIN DISTRIBUTION FRAMES AND ASSOCIATED WIRING

TASK #: 01270
INSPECT AN/TSC-102 MOBILE UHF SATELLITE TERMINAL
DUTY CODE: X0
TASK STATUS: 3R-KP
TIMES ANALYZED: 1

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: 168
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-2TSC102-1
TTT: 5
SME OPINION: 5

EQUIPMENT:
POWER METER, MULTIMETER, FREQUENCY COUNTER, DUMMY LOAD,
CLEANING SUPPLIES

REFERENCES:
T.O. 2-2TSC102-1

CONDITIONS CUES:
COND:
CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0181 4.65 29.0 30.0 30.0 21.0 4.21 12.0

ACTIVITIES SKILL KNOWLEDGE:
A CLEAN EQUIPMENT
A PERFORM AN/UGC-129 BUILT IN TEST
A PERFORM WSC-3 BUILT IN TEST
A CHECK WSC-3 FREQUENCY
A CHECK WSC-3 POWER SUPPLY OUTPUT VOLTAGE
A PERFORM AN/UGC-129 LOOP BACK TEST
A CHECK NONSECURE VOICE CIRCUIT OPERATION
A CHECK SECURE VOICE CIRCUIT OPERATION
A CHECK NONSECURE DATA CIRCUIT OPERATION

OSR JOB INVENTORY TASK STATEMENTS:
0 G0181 A PERFORM PREOPERATIONAL CHECKS OF EQUIPMENT

TASK #: 01280
TROUBLESHOOT AN/TSC-102 MOBILE UHF SATELLITE TERMINAL
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: ? (AS REQUIRED)
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: YES, YES
TNG REFERENCE(S): T.O. 2-1 SC102-1
TTT: 5
SME OPINION: 5

EQUIPMENT:
MULTIMETER, POWER METER, FREQUENCY COUNTER, OSCILLOSCOPE,
DECIBEL METER, SPECTRUM ANALYZER, SIGNAL GENERATOR

REFERENCES:
T.O. 2-2TSC102-1

CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT REMOVED FROM VEHICLE
CUE: USER COMPLAINT, RESULT OF PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0165 5.72 49.0 43.0 40.0 25.0 5.87 12.0

ACTIVITIES SKILL KNOWLEDGE:
A CHECK EQUIPMENT OPERATION
A PERFORM AN/UGC-129 BUILT IN TEST
A PERFORM AN/WSC-3 BUILT IN TEST
A REMOVE AND REPLACE FAULTY LRU INDICATED BY BITE
A ISOLATE MISCELLANEOUS SUBASSEMBLIES TO INDIVIDUAL
COMPONENT LEVEL (INTERFACE UNITS, PANEL ASSEMBLIES,
BATTERY CHARGER, AND SPEAKER AMPLIFIER)
A REMOVE AND REPLACE INDIVIDUAL COMPONENTS IN MISCELLA-
NEOUS SUBASSEMBLIES

OSR JOB INVENTORY TASK STATEMENTS:
0 G0165 K PERFORM CIRCUIT FAULT ISOLATION PROCEDURES

TASK #: 01240
INSPECT WD15 DEHYDRATOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): ECA CEMI 1000-15 AND T.O. 34Y11-2-18-2
TTT: 5
SME OPINION: 3
EQUIPMENT:
LEAK DETECTOR SOLUTION, CLEANING SUPPLIES, HAND TOOLS,
SET PLUG (DEHYDRATOR TEST ADAPTOR)
REFERENCES:
ECA CEMI 1000-15
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 J 0286 3.26 25.0 27.0 29.0 17.0 3.92 11.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK PLUMBING FOR LEAKS
A CLEAN AIR FILTER
A CLEAN EQUIPMENT EXTERIOR
A CHECK DEHYDRATOR OPERATION
A CHECK WAVEGUIDE PRESSURIZATION
A CHECK AND ADJUST LOW AND HIGH PRESSURE ALARMS
A CHECK AND ADJUST DEW POINT ALARM
A CHECK COMPRESSOR OPERATION
A CLEAN SINGLE AND DOUBLE CHECK VALVE
OSR JOB INVENTORY TASK STATEMENTS:
0 J0286 A INSPECT WAVEGUIDES

TASK #: 01300
TROUBLESHOOT WD15 DEHYDRATOR
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, INJURY
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 34Y11-2-18-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
LEAK DETECTOR SOLUTION, TUBE TESTER, VOLTmeter, OHM
METER, SET PLUG (DEHYDRATOR TEST ADAPTOR), ANALOG
MULTIMETER, DIGITAL MULTIMETER
REFERENCES:
T.O. 34Y11-2-18-2
CONDITIONS CUES:
COND: IN SHOP
CUE: FAULT ALARM, NON OPERATION, CONTINUOUS OPERATION,
PRESSURE OUT OF SPECIFICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 J 0292 1.74 15.0 12.0 11.0 7.0 4.88 7.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK AND ADJUST PRESSURE GAUGES
A CHECK PLUMBING FOR LEAKS
A CHECK AND ADJUST LOW AND HIGH PRESSURE ALARMS
A CHECK AND ADJUST DEW POINT ALARM
A INSPECT OPERATION OF MOTOR PARTS
A REMOVE AND REPLACE MECHANICAL PARTS
A TIGHTEN OR WRAP PLUMBING FITTINGS
A REPLACE TUBING
A REMOVE AND REPLACE HUMIDISTAT TUBE
OSR JOB INVENTORY TASK STATEMENTS:
0 J0292 K ISOLATE MALFUNCTIONS IN DEHYDRATORS

TASK #: 01310
INSPECT THE 46A3 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: DAILY, 28
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): NONE
TTT: 3
SME OPINION: 3
EQUIPMENT:
VACUUM CLEANER, LINT-FREE CLOTH, CLEAN ARTIST BRUSH,
GENERAL PURPOSE CLEANER, SELECTIVE VOLTMETER, TRANSMISSION
AND NOISE MEASURING SET, AUDIO OSCILLATOR
REFERENCES:
T.O. 31W2-4-340-1
T.O. LWC-2049-14-84 (LOCAL WORKCARD DEVELOPED FROM COMMERCIAL
CONDITIONS CUES:
COND: POWER ON, SPARE CHANNEL MODEMS ALWAYS AVAILABLE
CUE: PMI, MULTIPLEXER ALARMS, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 G 0158 4.20 30.0 21.0 16.0 10.0 4.22 11.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM NOISE AND LEVEL CHECK
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN INTERIOR AND EXTERIOR OF CABINET
OSR JOB INVENTORY TASK STATEMENTS:
0 G0158 A PERFORM ALTERNATE CIRCUIT ROUTING AT PATCH AND TEST
FACILITIES

TASK #: 01320
TROUBLESHOOT 46A3 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-4-340-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
SELECTIVE VOLTMETER, DIGITAL MULTIMETER, TRANSMISSION
AND NOISE MEASURING SET, AUDIO OSCILLATOR, FREQUENCY COUNTER,
TEST ADAPTER UNIT, AUDIO MEASURING SET, SOLDERING KIT
REFERENCES:
T.O. 31W2-4-340-1
CONDITIONS CUES:
COND: POWER ON, SPARE CHANNEL MODEMS ALWAYS AVAILABLE
CUE: PMI FINDING, MULTIPLEXER ALARMS, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0635 4.04 18.0 23.0 23.0 17.0~6.07 11.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY LINE REPLACEABLE UNITS (LRU)
A REMOVE AND REPLACE LRU
K ISOLATE FAULTY RELAYS
A REMOVE AND REPLACE RELAYS
OSR JOB INVENTORY TASK STATEMENTS:
0 M0635 K ISOLATE MALFUNCTIONS IN SOLID-STATE FREQUENCY DIVI-
SION MULTIPLEXERS

TASK #: 01330
ALIGN/ADJUST 46A3 MULTIPLEXER
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-4-340-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
SELECTIVE VOLTMETER, DIGITAL MULTIMETER, TRANSMISSION
AND NOISE MEASURING SET, AUDIO OSCILLATOR, FREQUENCY COUNTER,
TEST ADAPTOR UNIT, HANDTOOLS
REFERENCES:
T.O. 31W2-4-340-1
CONDITIONS CUES:
COND: POWER ON, SPARE CHANNEL MODEMS ALWAYS AVAILABLE
CUE: PHI FINDING, USER COMPLAINT, MULTIPLEXER ALARMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 M 0629 4.48 40.0 32.0 29.0 5.74 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST CHANNEL MODEM UNIT
A ALIGN/ADJUST CHANNEL MODEM UNIT E AND M SIGNAL
A ALIGN/ADJUST CHANNEL MODEM UNIT PILOT TONE OSCILLATOR
A ALIGN/ADJUST SYNCHRONIZATION UNIT
A ALIGN/ADJUST LINE DELAY EQUALIZER UNIT
A ALIGN/ADJUST GROUP PILOT OSCILLATOR UNIT
A ALIGN/ADJUST SYCNHRONIZATION SHELF LINE PILOT LEVEL
A MEASURE AND RECORD POWER SUPPLY VOLTAGES
OSR JOB INVENTORY TASK STATEMENTS:
0 M0629 A ALIGN FREQUENCY DIVISION MULTIPLEXERS

TASK #: 01340
TROUBLESHOOT 46A3 MULTIPLEXER POWER SUPPLY
DUTY CODE: X0
TASK STATUS: 3-OJT
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-4-340-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, SOLDERING KIT, HAND TOOLS
REFERENCES:
T.O. 31W2-4-340-1
CONDITIONS CUES:
COND: POWER ON FOR REDUNDANT SYSTEM
CUE: ALIGNMENT FINDING, MULTIPLEXER ALARMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X0 N 0746 2.20 10.0 8.0 7.0 4.0 6.05 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY COMPONENTS
A REMOVE OR REPLACE INDIVIDUAL COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
0 N0746 K ISOLATE MALFUNCTIONS IN DC POWER SUPPLY LINE ISOLA-
TION ASSEMBLIES

TASK #: 01350
INSPECT A.F. DIGITAL GRAPHICS SYSTEM (AFDIGS) MODEL 9500 DMDAF
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 28, 56
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X4-30Z
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, CLEANING MATERIALS, BLOWER
REFERENCES:
AFCC COMMUNICATIONS ELECTRONICS MAINTENANCE INSPECTIONS (CEMI)
800-1
QTP 304X4-30Z
ALDEN/DACOM DIGITAL RECEIVE TERMINAL MODEL 9500DMDAF COMMERCIAL
MANUAL
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0448 3.55 20.0 18.0 15.0 8.0 3.55 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS TO
INCLUDE PIN CONNECTION AND INDICATOR LAMP OPERATION
A PERFORM MARK TEST
A PERFORM SELF TEST
A CHECK FUNCTIONAL CONTROLS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0448 A OPERATIONALLY CHECK AUTOMATIC RECORDING SYSTEMS

TASK #: 01360
ALIGN A.F. DIGITAL GRAPHICS SYSTEM (AFDIGS) MODEL 9500 DMDAF TACHOMETER ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 1 MONTH
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X4-30Z
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS
REFERENCES:
ALDEN/DACOM DIGITAL RECEIVE TERMINAL MODEL 9500DMDAF COMMERCIAL
MANUAL
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: MAP PRINTING OFF CENTER
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0455 3.22 8.0 8.0 7.0 5.0 3.80 7.0
ACTIVITIES SKILL KNOWLEDGE:
A RUN TEST CHART
A ROTATE TACHOMETER ASSEMBLY UNTIL CENTERED
OSR JOB INVENTORY TASK STATEMENTS:
4 I0455 A OPERATIONALLY CHECK FACSIMILE SYSTEMS

TASK #: 01370
ADJUST A.F. DIGITAL GRAPHICS SYSTEM (AFDIGS) MODEL 9500 DMDAF LOOP BLADE ASSEMBLY

DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: 1 MONTH
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X4-30Z
TTT: 3
SME OPINION: 3

EQUIPMENT:
HANDTOOLS

REFERENCES:
ALDEN/DACOM DIGITAL RECEIVE TERMINAL MODEL 9500DMDAF COMMERCIAL MANUAL

CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: OPERATOR COMPLAINT, CUTTING PAPER INCORRECTLY

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0455 3.22 8.0 8.0 7.0 5.0 3.80 7.0

ACTIVITIES SKILL KNOWLEDGE:
A RUN SELF TEST
A ADJUST LOOP BLADE ASSEMBLY THUMBWHEELS FOR SMOOTH PAPER MOVEMENT AND ADEQUATE PAPER MARKING

OSR JOB INVENTORY TASK STATEMENTS:
4 I0455 A OPERATIONALLY CHECK FACSIMILE SYSTEMS

TASK #: 01380
ALIGN A.F. DIGITAL GRAPHICS SYSTEM (AFDIGS) MODEL 9500 DMDAF 5 VOLT POWER SUPPLY

DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: YEARLY
OJT TRAINABLE: YES, NO, TEST EQUIPMENT USE
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X4-30Z
TTT: 3
SME OPINION: 3

EQUIPMENT:
HANDTOOLS, OSCILLOSCOPE, DIGITAL VOLTMETER

REFERENCES:
ALDEN/DACOM DIGITAL RECEIVE TERMINAL MODEL 9500DMDAF COMMERCIAL MANUAL

CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: EXCESSIVE VOLTAGE, RESULT OF TROUBLESHOOT

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0455 3.22 8.0 8.0 7.0 5.0 3.80 7.0

ACTIVITIES SKILL KNOWLEDGE:
A CONNECT OSCILLOSCOPE
A MEASURE AND ADJUST PAPER FEED PULSE LEVEL IN TACHOMETER

OSR JOB INVENTORY TASK STATEMENTS:
4 I0455 A OPERATIONALLY CHECK FACSIMILE SYSTEMS

TASK #: 01390
TROUBLESHOOT A.F. DIGITAL GRAPHICS SYSTEM (AFDIGS) MODEL9500 DMDAF ELECTRICAL
COMPONENTS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: MONTHLY OR 45 DAYS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NO, DOESN'T COVER THOROUGHLY
QTP REFERENCE(S): QTP 304X4-30Z
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, OSCILLOSCOPE, DIGITAL VOLTMETER, CARD PULLER
REFERENCES:
ALDEN/DACOM DIGITAL RECEIVE TERMINAL MODEL 9500DMDAF COMMERCIAL
MANUAL
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: PRINTING SKEWED OR PRINTING INCORRECTLY, OR INCONSISTENT
MAP DENSITY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0425 3.72 4.0 5.0 5.0 4.0 5.98 11.0
304X4 I 0476 2.10 5.0 4.0 4.0 3.0 4.05 2.0
ACTIVITIES SKILL KNOWLEDGE:
A SELF TEST EQUIPMENT
K ISOLATE FAULT TO CIRCUIT CARD LEVEL WITH T.O. FLOW
CHARTS
A REMOVE OR REPLACE CIRCUIT CARDS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0476 A REMOVE OR INSTALL FACSIMILE EQUIPMENT LRU
4 I0425 K ISOLATE MALFUNCTIONS WITHIN FACSIMILE SYSTEMS TO LRU
4 T0476 A REMOVE OR INSTALL FACSIMILE EQUIPMENT LRU

TASK #: 01400
TROUBLESHOOT A.F. DIGITAL GRAPHICS SYSTEM (AFDIGS) MODEL9500 DMDAF MECHANICAL
COMPONENTS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: 30, BI-ANNUALLY, OR ANNUALLY
OJT TRAINABLE: YES, NO, COMPLICATED LINKAGES, CONNECTOR
FAMILIARITY, SAFETY FACTORS, AND BASIC ELECTRONICS
QTP ADEQUATE: NO, DOESN'T COVER THOROUGHLY
QTP REFERENCE(S): QTP 304X4-30Z
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS
REFERENCES:
ALDEN/DACOM DIGITAL RECEIVE TERMINAL MODEL 9500DMDAF COMMERCIAL
MANUAL
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: PHYSICAL DAMAGE TO MAP WHEN PRINTING, MAPS NOT READABLE
OR INCONSISTENT DENSITY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0425 3.72 4.0 5.0 5.0 4.0 5.98 11.0
ACTIVITIES SKILL KNOWLEDGE:
A SELF TEST EQUIPMENT
A ISOLATE FAULT TO MECHANICAL COMPONENT WITH T.O. FLOW
CHARTS
A POSITION TACHOMETER ANTI-BACKSLASH SPRING
A REMOVE LEFT AND RIGHT SHIM BLOCKS
A REMOVE HELIX DRIVE BELT
A REMOVE AND REPLACE HELIX DRUM
A POSITION ELECTRICAL CONTACT
A REPLACE DRIVE BELT AND SHIM BLOCKS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0425 K ISOLATE MALFUNCTIONS WITHIN FACSIMILE SYSTEMS TO LRU

TASK #: 01410
INSPECT CU-547 ANTENNA COUPLER
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: 168, 336
OJT TRAINABLE: YES. YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 3
EQUIPMENT:
WATTMETER, DUMMY LOAD, SIGNAL GENERATOR, CLEANING MATERIALS,
REFLECTOMETER
REFERENCES:
T.O. 31R1-2GR-141
T.O. 31R1-2GR-142
T.O. 31R1-2GR-144
T.O. 31R1-2GR-146WC-1
T.O. 31R1-2GR-184
T.O. 31R1-2GR-149
CONDITIONS CUES:
COND: WORKCENTER, OFF LINE
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0544 4.25 41.0 39.0 35.0 16.0 6.07 12.0
304X4 K 0565 4.00 29.0 29.0 27.0 14.0 5.65 11.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A ADJUST COUPLER TUNING KNOB
A PERFORM OPERATIONAL CHECK ON COUPLER
A REPLACE TANDEM CAVITY IF INSERTION LOSS IS OVER
LIMITS
A ADJUST SQUELCH ON RECEIVER THROUGH ANTENNA COUPLER
A REPEAT TEST CHECK FOR REMAINING JACKS ON ANTENNA
COUPLER
OSR JOB INVENTORY TASK STATEMENTS:
4 K0544 A ALIGN ANTENNA COUPLER COMPONENTS
4 K0565 A BENCH CHECK ANTENNA COUPERS

TASK #: 01420
TROUBLESHOOT CU-547 ANTENNA COUPLER
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SELDOM OCCURS
OJT TRAINABLE: YES. NO, BASIC ELECTRONICS REQUIRED
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-48C
TTT: 5
SME OPINION: 5
EQUIPMENT:
WATTMETER, DUMMY LOAD, SIGNAL GENERATOR, CLEANING MATERIALS
HANDTOOLS, REFLECTOMETER,
REFERENCES:
T.O. 31R1-2GR-141
T.O. 31R1-2GR-142
T.O. 31R1-2GR-144
T.O. 31R1-2GR-146WC-1
T.O. 31R1-2GR-184
T.O. 31R1-2GR-149
CONDITIONS CUES:
COND: WORKCENTER, OFF-LINE
CUE: USER COMPLAINT, FAILED PMI
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0585 3.18 21.0 23.0 21.0 12.0 5.36 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A ISOLATE FAULTY CHANNEL IN COUPLER
- A CHECK INSERTION LOSS
- A CHECK STANDING WAVE RATIO
- A REPLACE DEFECTIVE CAVITY

OSR JOB INVENTORY TASK STATEMENTS:

4 K0585 A REMOVE AND REPLACE ANTENNA COUPLER DISCRETE PARTS

TASK #: 01430

PERFORMANCE CHECK AN/FSC-82 INTERFACE UNIT

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: NONE, NONE, NONE

KOH OFTEN: 56, 168

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT, SYSTEM KNOWLEDGE

QTP ADEQUATE: NONE

TNG REFERENCE(S): LOCAL WORK CARDS 1961CG-FSC-82-0046

TTT: 3

SME OPINION: 3

EQUIPMENT:

OSCILLOSCOPE, AUDIO OSCILLATOR, VOLTMETER, FREQUENCY COUNTER,
DIGITAL MULTIMETER, ANALOG MULTIMETER

REFERENCES:

LOCAL WORK CARDS 1961CG-FSC-82-0046

CONDITIONS CUES:

COND: EQUIPMENT RELEASED, ON EQUIPMENT

CUE: PMI

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0670 .00 6.0 6.0 7.0 1.0 4.00

ACTIVITIES SKILL KNOWLEDGE:

- K RECALL USE OF JACKFIELD
- A CHECK AC POWER SUPPLY VOLTAGE AND ADJUST PER T.O.
- A CHECK 24/48 VOLT DC POWER SUPPLY VOLTAGE AND ADJUST PER
- A CHECK RING GENERATOR FREQUENCY AND ADJUST PER T.O.
- A CHECK FUSE PANEL INDICATOR
- A CHECK 6 VOLT POWER SUPPLY VOLTAGE AND ADJUST PER T.O.
- A CHECK RADIO CONNECT SWITCH PANEL INDICATORS AND SWITCHES
- A CHECK TELEPHONE PANEL INDICATORS AND SWITCHES
- A CHECK RADIO AUDIO LEVEL AND ADJUST PER T.O.
- A CHECK VOICE OPERATED KEY THRESHOLD AND ADJUST PER T.O.
- A CHECK MYSTIC STAR INTERFACE AUDIO LEVEL AND ADJUST PER
- A CHECK CRYPTO AND AUTOSEVOCOM INTERFACE AUDIO LEVELS AND ADJUST PER T.O.

OSR JOB INVENTORY TASK STATEMENTS:

6 Q0670 A PERFORM PMIS ON LINE AMPLIFIERS

TASK #: 01440
 PERFORMANCE CHECK AN/FSC-82 AN/WSC-3 RADIO
 DUTY CODE: X4
 TASK STATUS: 3-K
 TIMES ANALYZED: 3
 TNOTES:
 CONSEQUENCES: MINOR, NONE, NONE
 HOW OFTEN: 7, 28
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 5-2WSC3-1-1
 TIT: 5
 SME OPINION: 3
 EQUIPMENT:
 VOLTMETER, FREQUENCY COUNTER
 REFERENCES:
 T.O. 5-2WSC3-1-1
 CONDITIONS CUES:
 COND: EQUIPMENT RELEASED, ON EQUIPMENT
 CUE: PMI
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 Q 0668 .00 35.0 38.0 36.0 13.0 4.02
 ACTIVITIES SKILL KNOWLEDGE:
 A CONFIGURE RADIO FOR LOCAL OPERATION
 A PERFORM BITE PERFORMANCE TESTS
 A CHECK SYNTHESIZER INTERNAL FREQUENCY STANDARD AND
 ADJUST PER T.O.
 A CHECK AFC SHEEP VOLTAGE AND ADJUST PER T.O.
 A CHECK PHASE SHIFT KEY VOLTAGE AND ADJUST PER T.O.
 A INSPECT VISUALLY FOR CLEANLINESS
 A CLEAN AIR FILTER
 OSR JOB INVENTORY TASK STATEMENTS:
 6 Q0668 A PERFORM PMIS ON FREQUENCY SYNTHESIZERS

TASK #: 01450
 TROUBLESHOOT AN/FSC-82 AN/WSC-3 RADIO
 DUTY CODE: X6
 TASK STATUS: 3-KP
 TIMES ANALYZED: 3
 TNOTES:
 CONSEQUENCES: MINOR, NONE, NONE
 HOW OFTEN: THREE MONTHS
 OJT TRAINABLE: YES, NO, SYSTEM KNOWLEDGE, BASIC ELECTRONICS, TEST
 EQUIPMENT
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 5-2WSC3-1-1-1
 TIT: 5
 SME OPINION: 5
 EQUIPMENT:
 VOLTMETER, FREQUENCY COUNTER, OSCILLOSCOPE, DUMMY LOAD
 REFERENCES:
 T.O. 5-2WSC3-1-1-1
 CONDITIONS CUES:
 COND: EQUIPMENT RELEASED, ON EQUIPMENT
 CUE: USER COMPLAINT, RESULT OF PERFORMANCE CHECK
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 J 0228 .00 35.0 52.0 52.0 23.0 6.45
 304X6 N 0508 .00 18.0 27.0 28.0 16.0 5.20
 ACTIVITIES SKILL KNOWLEDGE:
 A PERFORM BITE CHECKS
 A REFERENCE T.O. TROUBLESHOOTING CHARTS AND DIAGRAMS TO
 DETERMINE FAULTY CIRCUIT CARD
 A SWAP INDICATED CIRCUIT CARD WITH KNOWN GOOD CARD
 A CONDUCT PERFORMANCE CHECKS TO ISOLATE FAULTY CARD OR
 COMPONENT
 OSR JOB INVENTORY TASK STATEMENTS:
 6 J0228 K ISOLATE MALFUNCTIONS IN ANTENNA CONTROLS
 6 N0508 K ISOLATE MALFUNCTIONS TO RECEIVER-TRANSMITTER (RT)
 SUBSYSTEMS

TASK #: 01460
REMOVE AND REPLACE AN/FSC-82 RADIO CIRCUIT CARDS, MODULES, AND COMPONENTS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: FOUR MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 5-2HSC3-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
HAND TOOLS, SOLDERING EQUIPMENT
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0218 .00 27.0 39.0 43.0 25.0 3.31
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE OR REPLACE POWER SUPPLIES
A REMOVE OR REPLACE POWER SUPPLY RECTIFIERS
A REMOVE OR REPLACE POWER SUPPLY FILTERS
A REMOVE OR REPLACE AM RECEIVERS
A REMOVE OR REPLACE FM RECEIVERS
A REMOVE OR REPLACE AM TRANSMITTERS
A REMOVE OR REPLACE FM TRANSMITTERS
A REMOVE OR REPLACE VOLTAGE REGULATORS
OSR JOB INVENTORY TASK STATEMENTS:
6 I0218 A REMOVE OR REPLACE LINE REPLACEABLE UNITS (LRU)

TASK #: 01470
CHANGE AN/FSC-82 ANTENNA AZIMUTH AND ELEVATION
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: TWO MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. NOT AVAILABLE
TTT: 5
SME OPINION: 3
EQUIPMENT:
HAND TOOLS
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, RF HAZARD
CUE: OPERATOR DIRECTED
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 H 0183 .00 39.0 45.0 43.0 22.0 5.40
304X6 H 0186 .00 54.0 57.0 54.0 25.0 4.84
ACTIVITIES SKILL KNOWLEDGE:
A LOOSEN SECURING BOLTS
A ROTATE ANTENNA TO DIRECTED AZIMUTH AND ELEVATION AS
INDICATED ON REFERENCE DIALS
A ALIGN ANTENNAS
OSR JOB INVENTORY TASK STATEMENTS:
6 H0183 A PERFORM ACQUISITION FUNCTIONS
6 H0186 A PERFORM TRACKING FUNCTIONS

TASK #: 01480
INSPECT AN/GRC-171 UHF TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: ANNUAL
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30D
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BOX, RF LOAD, RF SIGNAL GENERATOR, DISTORTION ANALYZER,
LINE FUSE HOLDER, 600 OHM LOAD, AUDIO TEST FIXTURE, 6 DV PAD,
INLINE FUSE HOLDER, DUMMY LOAD, POWER METER, RF MIXER,
OSCILLOSCOPE CLEANING SUPPLIES (BRUSHES/RAGS), VARIABLE
ATTENUATOR, FREQUENCY COUNTER, AUDIO OSCILLATOR, DIGITAL
MULTIMETER, WATTMETER, RF MIXER, OSCILLOSCOPE, SOLDERING KIT
REFERENCES:
T.O. 31R2-2GRC171-6WC-1
CONDITIONS CUES:
COND: CONTROL TOWER, MAINTENANCE WORK CENTER, INSIDE,
DAY, NIGHT, EQUIPMENT RELEASED
CUES: PMI SCHEDULE, SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0392 6.63 70.0 64.0 55.0 32.0 4.30 18.0
304X4 J 0516 5.40 46.0 41.0 34.0 15.0 6.17 12.0
304X4 J 0524 6.45 57.0 51.0 42.0 19.0 6.01 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT FOR OBVIOUS DAMAGE
A CHECK NORMAL OPERATION OF SYSTEM
A CHECK RECEIVER SQUELCH, SENSITIVITY, SIGNAL PLUS
NOISE TO NOTICE RATIO
A CHECK RECEIVER AND TRANSMITTER FREQUENCY
A CHECK TRANSMITTER PERCENT OF MODULATION
A CHECK FOR CLEANLINESS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0516 A BENCH CHECK MULTIPLE CHANNEL TRANSCEIVERS
4 J0524 A BENCH CHECK UHF TRANSCEIVERS
4 H0392 A OPERATIONALLY CHECK UHF EQUIPMENT

TASK #: 01490
TROUBLESHOOT AN/GRC-171 UHF TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: 180
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30D
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BOX, RF LOAD, RF SIGNAL GENERATOR, DISTORTION ANALYZER,
LINE FUSE HOLDER, 600 OHM LOAD, AUDIO TEST FIXTURE, 6 DV PAD,
INLINE FUSE HOLDER, OSCOPES CLEANING SUPPLIES (BRUSHES/RAGS),
VARIABLE ATTENUATOR, FREQUENCY COUNTER, AUDIO OSCILLATOR, DIGITAL
MULTIMETER, WATTMETER, RF MIXER, OSCILLOSCOPE, SOLDER KIT
REFERENCES:
T.O. 31R2-2GRC171-2
CONDITIONS CUES:
COND: CONTROL TOWER, MAINTENANCE SHOP, INSIDE, DAY, NIGHT
EQUIPMENT RELEASED
CUE: LOSS OF SIGNAL, DISTORTED SIGNAL, POWER LOSS, JOB
CONTROL CONTACTS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0

ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE CHASSIS
K ISOLATE RF POWER AMPLIFIER
K ISOLATE DC TO DC CONVERTER
K ISOLATE VOLTAGE REGULATOR
K ISOLATE KEYER MODULE
K ISOLATE RF FILTER
K ISOLATE AUDIO MODULE
K ISOLATE RECEIVER
K ISOLATE FREQUENCY SYNTHESIZER
K ISOLATE DIGITAL TO ANALOG SERVO AMPLIFIER
A REMOVE/REPLACE SUBASSEMBLIES, MODULES, CAPACITORS,
RESISTORS, TRANSISTORS, DIODES, TRANSFORMERS, AND IC
CIRCUITS

OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 01500
ALIGN/ADJUST AN/GRC-171 UHF TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2

NOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: 180
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30D
TTT: 3
SME OPINION: 3

EQUIPMENT:
TOOL BOX, RF LOAD, RF SIGNAL GENERATOR, DISTORTION ANALYZER,
LINE FUSE HOLDER, AUDIO TEST FIXTURE, RF MIXER, 6 DV PAD,
INLINE FUSE HOLDER, 600 OHM LOAD, RF MIXER, OSCILLOSCOPE,
VARIABLE ATTENUATOR, FREQUENCY COUNTER, AUDIO OSCILLATOR, DIGITAL
MULTIMETER, WATTMETER, OSCILLOSCOPE CLEANING SUPPLIES
(BRUSHES/RAGS)

REFERENCES:
T.O. 31R2-2GRC171-2

CONDITIONS CUES:
COND: MAINTENANCE SHOP, CONTROL TOWER, DAY, NIGHT,
EQUIPMENT RELEASED
CUES: PMI FINDINGS, SYSTEM MALFUNCTIONS

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0

ACTIVITIES SKILL KNOWLEDGE:
A ADJUST RECEIVE AUDIO
A ADJUST SQUELCH
A ADJUST MODULATION PERCENTAGE
A ADJUST SIDE TONE

OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN VERY HIGH FREQUENCY (VHF) EQUIPMENT

TASK #: 01510
INSPECT AN/GRC-206 V3 MOBILE HF/VHF/UHF COMMUNICATIONS SYSTEM
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 60
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-2GRC206-2 AND T.O. 2-2GRC206-2-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
HANDTOOLS, OSCILLOSCOPE, REFLECTOMETER, SIGNAL GENERATOR,
ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER,
AUDIO FILTER
REFERENCES:
T.O. 2-2GRC206-2
T.O. 2-2GRC206-2-1
CONDITIONS CUES:
COND:
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
304X4 H 0392 6.63 70.0 64.0 55.0 32.0 4.30 18.0
304X4 H 0393 6.33 53.0 50.0 43.0 27.0 4.23 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN AND LUBRICATE EQUIPMENT
A CHECK AND ADJUST POWER SUPPLY
A CHECK REMOTE CAPABILITY
A CHECK AUDIO INPUT LEVELS
A CHECK TRANSMIT OUTPUT POWER
A CHECK TRANSMIT FREQUENCY
A CHECK RECEIVE SENSITIVITY
A CHECK AUDIO DEGRADATION (FIBER OPTICS NOISE LEVELS)
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
4 H0392 A OPERATIONALLY CHECK UHF EQUIPMENT
4 H0393 A OPERATIONALLY CHECK VHF EQUIPMENT

TASK #: 01520
TROUBLESHOOT AN/GRC-206 V3 MOBILE HF/VHF/UHF COMMUNICATIONS SYSTEM
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: INDEFINITE (AS REQUIRED)
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-2GRC206-2 AND T.O. 2-2GRC206-2-1
TTT: 5
SME OPINION: 5
EQUIPMFNT:
HANDTOOLS, ALIGNMENT TOOLS, SOLDERING EQUIPMENT, OSCILLOSCOPE,
ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER,
REFLECTOMETER, SIGNAL GENERATOR
REFERENCES:
T.O. 2-2GRC206-2
T.O. 2-2GRC206-2-1
CONDITIONS CUES:
COND: OPERATIONAL OR GARRISON
CUE: USER COMPLAINT, RESULT OF PMI CHECK
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
 304X4 H 0393 6.33 53.0 50.0 43.0 27.0 4.23 18.0
 304X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A OPERATIONALLY CHECK EQUIPMENT
- K ISOLATE FAULTY COMPONENT ON FM PORTION IF IN GARRISON
- K ISOLATE FAULTY RADIO GROUP
- K ISOLATE FAULTY LRU IF IN FIELD
- A REMOVE/REPLACE FAULTY LRU, CIRCUIT CARDS, COMPONENTS, AND ASSOCIATED PARTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
- 4 H0393 A OPERATIONALLY CHECK VHF EQUIPMENT
- 4 M0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

TASK #: 01530

INSPECT AN/GRC-211 VHF TRANSCEIVER

DUTY CODE: X4

TASK STATUS: 3-K

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, NONE

HOW OFTEN: 336

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X4-30D

TTT: 3

SME OPINION: 3

EQUIPMENT:

TOOL BOX, RF LOAD, RF SIGNAL GENERATOR, DISTORTION ANALYZER, AUDIO TEST FIXTURE, 600 OHM LOAD, VARIABLE ATTENUATOR, FREQUENCY COUNTER, AUDIO OSCILLATOR, DIGITAL MULTIMETER, WATTMETER, RF MIXER, 6 DV PAD, OSCILLOSCOPE, INLINE FUSE HOLDER, CLEANING SUPPLIES (BRUSHES/RAGS), SOLDERING KIT

REFERENCES:

T.O. 31R2-2GRC211-6WC-1

CONDITIONS CUES:

COND: CONTROL TOWER, MAINTENANCE WORK CENTER, INSIDE, DAY, NIGHT, EQUIPMENT RELEASED

CUE: PMI SCHEDULE, SYSTEM MALFUNCTIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 J 0516 5.40 46.0 41.0 34.0 15.0 6.17 12.0
 304X4 J 0528 6.37 46.0 41.0 34.0 16.0 6.08 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK NORMAL OPERATION OF SYSTEM
- A INSPECT RECEIVER SQUELCH, SENSITIVITY, SIGNAL PLUS NOISE TO NOISE RATIO CHECK
- A CHECK RECEIVER AND TRANSMITTER FREQUENCY
- A CHECK TRANSMITTER PERCENT OF MODULATION
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0516 A BENCH CHECK MULTIPLE CHANNEL TRANSCEIVERS

TASK #: 01540
TROUBLESHOOT AN/GRC-211 VHF TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: 180
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30D
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BOX, RF LOAD, RF SIGNAL GENERATOR, DISTORTION ANALYZER,
AUDIO TEST FIXTURE, 600 OHM LOAD, VARIABLE ATTENUATOR, FREQUENCY
COUNTER, AUDIO OSCILLATOR, DIGITAL MULTIMETER, WATTMETER, RF
MIXER, 6 DV PAD, OSCILLOSCOPE, INLINE FUSE HOLDER, CLEANING
SUPPLIES (BRUSHES/RAGS), SOLDERING KIT
REFERENCES:
T.O. 31R2-2GRC211-2
T.O. 31R2-2GRC171-2
CONDITIONS CUES:
COND: CONTROL TOWER, MAINTENANCE SHOP, INSIDE, DAY, NIGHT,
EQUIPMENT RELEASED
CUE: LOSS/DISTORTED SIGNAL, POWER LOSS, JOB CONTROL
CONTACTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0379 6.55 49.0 47.0 41.0 23.0 6.39 12.0
304X4 J 0542 5.77 49.0 45.0 39.0 22.0 5.05 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE CHASSIS
K ISOLATE RF POWER AMPLIFIER
K ISOLATE DC TO DC CONVERTER
K ISOLATE VOLTAGE REGULATOR
K ISOLATE KEYER MODULE
K ISOLATE RF FILTER
K ISOLATE AUDIO MODULE
K ISOLATE RECEIVER
K ISOLATE FREQUENCY SYNTHESIZER
K ISOLATE DIGITAL TO ANALOG SERVO AMPLIFIER
A REMOVE/REPLACE SUBASSEMBLIES, MODULES, AND COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0379 K ISOLATE MALFUNCTIONS WITHIN VERY HIGH FREQUENCY (VHF)
EQUIPMENT
4 J0542 A REMOVE OR INSTALL VHF EQUIPMENT PARTS

TASK #: 01550
ALIGN/ADJUST AN/GRC-211 VHF TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: 180
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30D
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BOX, RF LOAD, RF SIGNAL GENERATOR, DISTORTION ANALYZER,
AUDIO TEST FIXTURE, 600 OHM LOAD, VARIABLE ATTENUATOR, FREQUENCY
COUNTER, AUDIO OSCILLATOR, DIGITAL MULTIMETER, WATTMETER, RF
MIXER, 6 DV PAD, OSCILLOSCOPE, INLINE FUSE HOLDER, CLEANING
SUPPLIES (BRUSHES/RAGS)
REFERENCES:
T.O. 31R2-2GRC211-2
T.O. 31R2-2GRC171-2
CONDITIONS CUES:
COND: MAINTENANCE SHOP, CONTROL TOWER, DAY, NIGHT,
EQUIPMENT RELEASED
CUES: PMI FINDINGS, SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0501 2.57 1.0 1.0 2.0 2.0 6.14 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A ADJUST RECEIVE AUDIO
- A ADJUST SQUELCH
- A ADJUST MODULATION PERCENTAGE
- A ADJUST SIDE TONE

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0501 A BENCH CHECK DF CONTROL UNITS

TASK #: 01560

INSPECT THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM

DUTY CODE: X4

TASK STATUS: 3-K?

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: NONE, NONE, NONE

HOW OFTEN: 7, 56, 84, 168

GJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2GRC212-126WC-1

TTT: 5

SME OPINION: 3

EQUIPMENT:

VACUUM CLEANER, SOFT BRISTLE BRUSH, LINT-FREE CLOTH, CLEANING SOLVENT

REFERENCES:

T.O. 31R2-2GRC212-126WC-1

CONDITIONS CUES:

COND: IN SHOP, EQUIPMENT RELEASED

CUE: PHI

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
304X4 H 0391 5.47 42.0 43.0 40.0 21.0 4.29 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM RECEIVER DIAGNOSTIC TEST

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS

- A CLEAN INTERIOR AND EXTERIOR OF EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

- 4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

- 4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 01570

ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM RECEIVER AUTOMATIC GAIN CONTROL (AGC)

DUTY CODE: X4

TASK STATUS: 3-K

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: NONE, DAMAGE, NONE

HOW OFTEN: SEMI-ANNUALLY

GJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): LOCAL MANUAL

TTT: 5

SME OPINION: 5

EQUIPMENT:

VOLTMETER, AUDIO TEST SET, SIGNAL GENERATOR

REFERENCES:

LOCAL MANUAL

CONDITIONS CUES:

COND: IN SHOP, EQUIPMENT RELEASED

CUE: USER COMPLAINT, RECEIVER VOLTAGE OUT OF TOLERANCE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TF 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSERT RF SIGNAL TO RECEIVE AUDIO

- A CHECK AGC VOLTAGES

- A ADJUST INTERMEDIATE FREQUENCY CARD

- K APPLY SINGLE SIDEBAND THEORY OF OPERATION

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0497 A ALIGN SIDE BAND EQUIPMENT

TASK #: 01580
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM RECEIVER LINE AUDIO LEVEL
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LOCAL MANUAL
TTT: 5
SME OPINION: 5
EQUIPMENT:
VOLTMETER, AUDIO TEST SET, SIGNAL GENERATOR
REFERENCES:
LOCAL MANUAL
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: USER COMPLAINT, RECEIVER AUDIO OUT OF TOLERANCE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSERT AUDIO SIGNAL
A CHECK AUDIO OUTPUT LEVEL
A ADJUST AUDIO OUTPUT LEVEL
OSR JOB INVENTORY TASK STATEMENTS:
4 J0497 A ALIGN SIDE BAND EQUIPMENT

TASK #: 01590
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM SOLID STATE VOICE STORAGE UNIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2GRC212-32-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
LINE MATCHING TRANSFORMER
REFERENCES:
T.O. 31R2-2GRC212-32-2
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: USER COMPLAINT, PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST AUDIO AMPLIFIER COMPONENTS
A ADJUST AUDIO AMPLIFIERS
A ADJUST AUDIO CIRCUITS
A ADJUST AMPLITUDE OR LINE EQUALIZER COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 01600
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM DC POWER SUPPLY
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2GRC212-32-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER
REFERENCES:
T.O. 31R2-2GRC212-32-2
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: USER COMPLAINT, PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0518 5.30 43.0 42.0 41.0 20.0 5.34 12.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK OUTPUT VOLTAGE
A ADJUST VOLTAGE
OSR JOB INVENTORY TASK STATEMENTS:
4 J0518 A BENCH CHECK POWER SUPPLY EQUIPMENT

TASK #: 01610
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM STATION PAK
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: 168
OJT TRAINABLE: YES, NO, SYSTEMS KNOWLEDGE AND TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2GRC212-36WC-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, AUDIO TEST SET
REFERENCES:
T.O. 31R2-2GRC212-36WC-1
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, SYSTEM FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSERT AUDIO SIGNAL
A CHECK AUDIO OUTPUT LEVEL
A ADJUST AUDIO OUTPUT LEVEL
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 01620
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM MATRIX PRINTER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO, (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2GRC212-36WC-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, AUDIO TEST SET
REFERENCES:
T.O. 31R2-2GRC212-36WC-1
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, SYSTEM FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSERT AUDIO SIGNAL
A CHECK AUDIO OUTPUT LEVEL
A ADJUST AUDIO OUTPUT LEVEL
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 01630
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM STANDARD FREQUENCY GROUP
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: ONCE EVERY TWO YEARS
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2GRC212-1151
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, 10:1 PROBE, PC BOARD EXTENDER,
WAVE ANALYZER, FREQUENCY COUNTER, AC VOLTMETER, OSCILLATOR
REFERENCES:
T.O. 31R2-2GRC212-1151
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI, SYSTEM FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST REGULATED DC VOLTAGE LEVEL
A ADJUST PHASE BALANCE CONTROL
A ADJUST AUTOMATIC GAIN CONTROL AMPLIFIER
A ADJUST AUTOMATIC GAIN CONTROL THRESHOLD (DEPOT ONLY)
A ADJUST DELAY GENERATOR (DEPOT ONLY)
A ADJUST 10 MHZ CRYSTAL FILTER
A ADJUST FREQUENCY DIVIDER (DEPOT ONLY)
A ADJUST AUTOMATIC GAIN CONTROL THRESHOLD (DEPOT ONLY)
A ADJUST PHASE DETECTOR/VCO BIAS BALANCE (DEPOT ONLY)
A ADJUST VOLTAGE CONTROLLED OSCILLATOR FREQUENCY
A ADJUST PHASE MODULATION (DEPOT ONLY)
A ADJUST PHASE SPLITTING AMPLIFIER (DEPOT ONLY)
A ADJUST IMAGE REJECTION (DEPOT ONLY)
A ADJUST PREAMPLIFIER GAIN
A ADJUST IF AMPLIFIER/AGC DETECTOR
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 01640
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM DUAL LINE AMPLIFIER

DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO, (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2GRC212-32-2
TTT: 5
SME OPINION: 5

EQUIPMENT:
AUDIO TEST SET

REFERENCES:
T.O. 31R2-2GRC212-32-2

CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: PHI, SYSTEM FAILURE, OPERATOR COMPLAINT

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0504 6.38 40.0 39.0 35.0 16.0 5.87 12.0

ACTIVITIES SKILL KNOWLEDGE:
A INSERT AUDIO SIGNAL TO AMPLIFIER INPUT
A CHECK AMPLIFIER OUTPUT
A ADJUST AMPLIFIER EQUALIZER CONTROL

OSR JOB INVENTORY TASK STATEMENTS:
4 J0504 A BENCH CHECK HF POWER AMPLIFIERS OR SUBASSEMBLIES

TASK #: 01650
ALIGN AND ADJUST THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM SINGLE FREQUENCY SIGNAL UNIT

DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3

TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2GRC212-162
TTT: 5
SME OPINION: 5

EQUIPMENT:
AUDIO TEST SET

REFERENCES:
T.O. 31R2-2GRC212-162

CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: SYSTEM FAILURE, OPERATOR COMPLAINT

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0

ACTIVITIES SKILL KNOWLEDGE:
A INSERT AUDIO SIGNAL
A CHECK SINGLE FREQUENCY SIGNAL OUTPUT
A ADJUST AUDIO ATTENUATION LEVEL

OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 01660
TROUBLESHOOT THE AN/GRC-212 HF/ISB COMMAND CONTROL SYSTEM STATION
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: DAILY, MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TING REFERENCE(S): SEE REFERENCES:

TTT: 5

SME OPINION: 5

EQUIPMENT:

BITE, SIGNAL GENERATOR, DIGITAL MULTIMETER, AUDIO TEST SET,
HANDTOOLS

REFERENCES:

T.O. 31R2-2GRC212-2
T.O. 31R2-2GRC212-12
T.O. 31R2-2GRC212-62
T.O. 31R2-2GRC212-32-2
T.O. 31R2-2GRC212-122
T.O. 31R2-2GRC212-16WC-1
T.O. 31R2-2GRC212-36WC-1
T.O. 31R2-2GRC212-66WC-1
T.O. 31R2-2GRC212-116WC-1
T.O. 31R2-2GRC212-126WC-1
T.O. 31R2-2GRC212-286WC-1
T.O. 31R2-2GRC212-306WC-1
T.O. 31R2-2GRC212-316WC-1
T.O. 31R2-2GRC212-326WC-1
T.O. 31R2-2GRC212-356WC-1
T.O. 31R2-2GRC212-366WC-1
T.O. 31R2-2GRC212-376WC-1
T.O. 31R2-2GRC212-416WC-1
T.O. 31R2-2GRC212-426WC-1
T.O. 31R2-2GRC212-436WC-1
T.O. 31R2-2GRC212-446WC-1
T.O. 31R2-2GRC212-456WC-1

LOCALLY DEVELOPED FLOW CHART

CONDITIONS CUES:

COND: IN SHOP, EQUIPMENT RELEASED
CUE: PMI RESULTS, USER COMPLAINT

JCB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
	304X4 H	0377	6.07	43.0	44.0	41.0	20.0	6.55
	304X4 H	0404	4.58	22.0	22.0	23.0	13.0	4.02
								11.0

ACTIVITIES SKILL KNOWLEDGE:

A PERFORM OPERATION CHECK
K ISOLATE TO FAULTY CARD
A REMOVE/REPLACE ASSEMBLIES, SUBASSEMBLIES, CIRCUIT
CARDS AND ASSOCIATED ARTS

OSR JOB INVENTORY TASK STATEMENTS:

4 H0377 K ISOLATE MALFUNCTIONS WITHIN SIDE BAND EQUIPMENT
4 H0404 A REMOVE OR INSTALL SIDE BAND SYSTEM LRU

TASK #: 01670
INSPECT AN/GRC-212 HF/ISB OPERATOR CONSOLE
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 28, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 3
EQUIPMENT:
VACUUM, SOFT BRISTLE BRUSH, TOOL KIT, CLEAN LINT FREE CLOTH,
DRY CLEANING SOLVENT
REFERENCES:
T.O. 31R2-2GRC212-146WC-1
CONDITIONS CUES:
COND: IN OPERATION ROOM, POWER ON
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN INTERIOR/EXTERIOR OF ALL CONSOLE SUBASSEMBLIES
K APPLY ELECTROSTATIC DISCHARGE CONTROL (ESD) PRECAUTIONS
K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS
(PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 01680
TROUBLESHOOT AN/GRC-212 HF/ISB SB-4142 VOX PHONE PATCH PANEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NCNE
SME OPINION: 3
EQUIPMENT:
AC VOLTMETER, OSCILLOSCOPE, AUDIO OSCILLATOR, DUAL POWER SUPPLIES, FREQUENCY COUNTER, DIGITAL MULTIMETER, TOOL KIT
REFERENCES:
T.O. 31R2-2GRC212-202
T.O. 31R2-2GRC212-46WC-1
CONDITIONS CUES:
COND: IN OPERATORS ROOM, POWER ON/OFF
CUE: PMI FINDING, OPERATOR COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0423 4.62 22.0 24.0 22.0 12.0 5.29 11.0
304X4 I 0432 3.17 11.0 13.0 13.0 6.0 5.22 7.0
304X4 I 0482 2.03 7.0 9.0 9.0 5.0 3.82 2.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK LIGHTS AND LAMPS
- A CHECK POTENTIOMETERS
- A CHECK VU-METERS
- A CHECK VOLTAGES AND FREQUENCIES
- A ISOLATE FAULTY LINE INTERFACE CIRCUIT CARD ASSEMBLY
- A ISOLATE FAULTY OPERATOR INTERFACE CIRCUIT CARD ASSEMBLY
- A ISOLATE FAULTY 5 WAY CONFERENCE CIRCUIT CARD ASSEMBLY
- A ISOLATE FAULTY VOX/AVOX CIRCUIT CARD ASSEMBLY
- A ISOLATE FAULTY DEVOX/DCMS GENERATOR CIRCUIT CARD ASSEMBLY
- A ISOLATE FAULTY CHASSIS AND FRONT PANEL
- A REMOVE REPLACE VOX PHONE PATCH PANEL CIRCUIT CARDS, ASSEMBLIES, AND COMPONENTS/PARTS
- A ALIGN/ADJUST PHONE PATCH LEVEL
- K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)
- K INTERPRET MAINTENANCE DEPENDENCY CHART

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0423 K ISOLATE MALFUNCTIONS WITHIN COMMUNICATIONS PATCH PANELS TO LRU
- 4 I0432 K ISOLATE MALFUNCTIONS WITHIN PHONE PATCH SYSTEMS TO LRU
- 4 I0482 A REMOVE OR INSTALL PHONE PATCH EQUIPMENT LRU

TASK #: 01690

TROUBLESHOOT AN/GRC-212 HF/ISB C-11014 CONTROL MONITOR

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, NONE

HOW OFTEN: BI-MONTHLY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS

TNG REFERENCE(S): QTP 304X4-30NA

TTT: NONE

SME OPINION: 3

EQUIPMENT:

TOOL KIT, AUDIO OSCILLATOR, DIGITAL MULTIMETER, ATTENUATOR, DC POWER SUPPLIES

REFERENCES:

1.O. 31RW-2GRC212-192

CONDITIONS CUES:

COND: IN OPERATION ROOM, POWER ON/OFF

CUE: PMI FINDING, OPERATOR COMPLAINT

JOB STANDARDS:

IAW REFERENCES

USR DATA:	TASK	TE	IJOB	IENL	5SKL	7SKL	TD	ATI
	304X4 H	0373	6.45	56.0	60.0	57.0	30.0	6.48
	304X4 H	0396	4.78	29.0	31.0	34.0	22.0	3.82
								12.0

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM OPERATION CHECK OF CONTROL MONITOR
- A CHECK HEADSET VOLUME ADJUSTMENT
- A CHECK LIGHTS AND LAMPS
- A CHECK AC SIGNAL VOLTAGES
- A CHECK CHECK VU-METER OPERATION
- K ISOLATE FAULTY SWITCH MATRIX A1
- K ISOLATE FAULTY SWITCH MATRIX A2
- K ISOLATE FAULTY MASTER CONTROL PANEL (MCP) CIRCUIT CARD ASSEMBLY
- A REMOVE/REPLACE SWITCH MATRIXES, MCP CIRCUIT CARD, AND RELATED COMPONENTS
- K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT

- 4 H0396 A REMOVE OR INSTALL HF SYSTEM LRU

TASK #: 01700
 TROUBLESHOOT AN/GRC-212 HF/ISB CONSOLE 24 VOLT POWER SUPPLY
 DUTY CODE: X4
 TASK STATUS: 3-KP
 TIMES ANALYZED: 2
 TNOTES:
 CONSEQUENCES: MINOR, NONE, INJURY
 HOW OFTEN: QUARTERLY
 QJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
 QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
 TNG REFERENCE(S): QTP 304X4-30NA
 TTT: NONE
 SME OPINION: 3
 COMPONENT REPAIR RECENTLY AUTHORIZED BUT NOT YET PERFORMED
 EQUIPMENT:
 TOOL KIT, DIGITAL MULTIMETER, OSCILLOSCOPE, RIPPLE METER, VARIAC,
 DIFFERENTIAL METER (VTBN), VACUUM TUBE VOLTMETER, LOAD, SOLDERING
 KIT
 REFERENCES:
 INSTRUCTION MANUAL LJS-II SERIES (LAMBDA ELECTRONICS -
 MELVILLE, LONG ISLAND NEW YORK)
 CONDITIONS CUES:
 COND: IN-RACK AND ON-BENCH, POWER ON/OFF
 CUE: PMI FINDING, OPERATOR COMPLAINT, ASSEMBLY FAILURE,
 AUDIO ALARM
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK YE IJOB IENL 5SKL 7SKL TD ATI
 304X4 J 0518 5.50 45.0 42.0 41.0 20.0 5.34 12.0
 304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0
 304X4 K 0593 3.67 32.0 31.0 38.0 13.0 4.98 12.0
 ACTIVITIES SKILL KNOWLEDGE:
 A PERFORM OPERATION CHECK OF ASSEMBLIES POWERED BY
 POWER SUPPLY
 A CHECK RIPPLE AND REGULATION OF POWER SUPPLY
 A CHECK POWER SUPPLY LOAD REGULATION ACCURACY
 A CHECK POWER SUPPLY LINE REGULATION ACCURACY
 A CALIBRATE VOLTAGE AND CURRENT CONTROLS
 K ISOLATE FAULTY POWER SUPPLY/PARTS
 A REMOVE/REPLACE 24 VOLT POWER SUPPLY/PARTS
 K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS
 (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)
 OSR JOB INVENTORY TASK STATEMENTS:
 4 J0518 A BENCH CHECK POWER SUPPLY EQUIPMENT
 4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS
 4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DIS-
 CRETE PARTS

TASK #: 01710
 TROUBLESHOOT AN/GRC-212 HF/ISB CONTROL CONSO/ MONITOR PANEL
 DUTY CODE: X4
 TASK STATUS: 3-KP
 TIMES ANALYZED: 2
 TNOTES:
 CONSEQUENCES: MINOR, NONE, NONE
 HOW OFTEN: ANNUALLY
 QJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
 QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
 TNG REFERENCE(S): QTP 304X4-30NA
 TTT: NONE
 SME OPINION: 3
 EQUIPMENT:
 TOOL KIT, AUDIO OSCILLATOR WITH ELECTRONIC COUNTER TO VERIFY
 FREQUENCY OR TRANSMISSION TEST SET, DIGITAL MULTIMETER, DC
 POWER SUPPLIES, SOLDERING KIT
 REFERENCES:
 T.O. 31R2-2GRC212-182
 CONDITIONS CUES:
 COND: IN-RACK, POWER ON/OFF
 CUE: PMI FINDING, OPERATOR COMPLAINT
 JOB STANDARDS:
 IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0573 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0396 4.78 29.0 31.0 34.0 22.0 3.82 12.0

ACTIVITIES SKILL KNOWLEDGE:
A ISOLATE FAULTY MODULE SHELF
A ISOLATE FAULTY MONITOR MODULE
A REMOVE/REPLACE MODULES, SWITCHES, POTENTIOMETERS, AND RELATED COMPONENTS
K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)

OSR JOB INVENTORY TASK STATEMENTS:
4 H0573 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT
4 H0396 A REMOVE OR INSTALL HF SYSTEM LRU

TASK #: 01720
TROUBLESHOOT AN/GRC-212 HF/ISB VIDEO DISPLAY TERMINAL (VDT)
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2

NOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 5
VDT'S ARE INTERCHANGEABLE BETWEEN TRANSMIT, RECEIVE, AND CONSOLE EQUIPMENT:
TOOL KIT, DIGITAL MULTIMETER, OSCILLOSCOPE

REFERENCES:
T.O. 31R2-2GRC212-1061

CONDITIONS CUES:
COND: IN-SHOP OR ON-EQUIPMENT, POWER ON/OFF
CUE: OPERATOR COMPLAINT, FAILURE TO DISPLAY TEST INFORMATION

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0

ACTIVITIES SKILL KNOWLEDGE:
A CHECK POWER SUPPLY VOLTAGES
A RESET DIP SWITCHES TO ADJUST OPERATION
A CHECK FOR OPERATOR ERROR
A INSPECT VDT FOR FAULTY FUSES, TRANSFORMER STRAPPING, POWER SUPPLY WIRE HARNESSSES, AND CABLING
A CHECK INPUT/OUTPUT (RS-232)
A CHECK AND ADJUST CRT SCREEN CONTROLS FOR MONITORS CAPABLE OF ADJUSTMENT
K ISOLATE FAULTY CRT
K ISOLATE FAULTY LOGIC BOARD CIRCUIT CARD
K ISOLATE FAULTY POWER SUPPLY
K ISOLATE FAULTY KEYBOARD
A REMOVE/REPLACE MODULES, ASSEMBLIES, AND RELATED COMPONENTS
K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)

OSR JOB INVENTORY TASK STATEMENTS:
4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS

TASK #: 01730
INSPECT AN/GRC-212 HF/ISB CONTROL MONITOR (C11012 LEVEL DECODER)
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO (INADEQUATE INFORMATION)
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 3
EQUIPMENT:
VDSL KIT, VACUUM CLEANER, DUST RAG, SOFT BRISTLE BRUSH
REFERENCES:
T.O. 31R2-2GRC212-66WC-1
CONDITIONS CUES:
COND: IN-SHOP ON RACK, POWER ON
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0579 4.55 44.0 43.0 59.0 18.0 5.05 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN INTERIOR/EXTERIOR OF CONTROL MONITOR (IN-RACK)
K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS
(PECULIAR TO AN/GRC-212 STAN TALK SYSTEM)
OSR JOB INVENTORY TASK STATEMENTS:
4 K0579 A BENCH CHECK POWER SUPPLY 1N:1S

TASK #: 01740
TROUBLESHOOT AN/GRC-212 HF/ISB CONTROL MONITOR (C11012 LEVEL DECODER)
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO (INADEQUATE INFORMATION)
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 5
EQUIPMENT:
TOOL KIT, DIGITAL MULTIMETER, 5 VOLT POWER SUPPLY, AC VOLTMETER,
OSCILLOSCOPE, VIDEO DISPLAY TERMINAL, FREQUENCY COUNTER,
SOLDERING KIT
REFERENCES:
T.O. 31R2-2GRC212-62
T.O. 31R2-2GRC212-64
CONDITIONS CUES:
COND: IN-SHOP AND ON-RACK, POWER ON/OFF
CUE: OPERATOR COMPLAINT, FAILED CIRCUIT CARD OR OTHER PARTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0396 4.78 29.0 31.0 34.0 22.0 3.82 12.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK INPUT/OUTPUT CIRCUIT CARD LED DISPLAY
A MEASURE I/O CARD VOLTAGES, SYMMETRY, AUDIO OUTPUT
LEVEL
A ALIGN/ADJUST I/O CARD VOLTAGE, SYMMETRY, AND AUDIO
OUTPUT LEVEL AND/OR REPLACE I/O CARD
K INTERPRET BITE LED DISPLAY CODES
K ISOLATE FAULTY INPUT/OUTPUT CIRCUIT CARD
K ISOLATE FAULTY 6K EPROM CIRCUIT CARD
K ISOLATE FAULTY 16K EPROM CIRCUIT CARD
K ISOLATE FAULTY CPU CIRCUIT CARD
K ISOLATE FAULTY POWER SUPPLY ASSEMBLY
A REMOVE/REPLACE CIRCUIT CARDS AND OTHER PARTS EXCEPT
INPUT/OUTPUT (I/O) CIRCUIT CARD
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 H0396 A REMOVE OR INSTALL HF SYSTEM LRU

TASK #: 01750
INSPECT AN/GRC-212 HF/ISB AM-7125 LINEAR POWER AMPLIFIER (LPA)
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: 7, 56, 168,
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 3
EQUIPMENT:
BITE, TOOL KIT, 8021 TEST SET, CLEANING SUPPLIES, VACUUM CLEANER,
DIGITAL MULTIMETER, BURNISHING TOOL
REFERENCES:
T.O. 31R2-2GRC212-96WC-1
T.O. 31R2-2GRC212-26WC-1
CONDITIONS CUES:
COND: IN-SHOP, POWER ON/OFF, 2 MAN TEAM
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
304X4 H 0391 5.47 42.0 43.0 40.0 21.0 4.29 12.0
ACTIVITIES SKILL KNOWLEDGE:
A TRANSFER CONTROL OF LPA (OPERATORS)
A PERFORM OPERATION CHECK WITH BITE
A VERIFY OPERATION OF HF-8014A EXCITER
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK RF SHIELD MATERIAL
A CLEAN INTERIOR/EXTERIOR OF CABINET
A CHECK AIR FILTERS AND/OR REPLACE FILTER PAPER
A CHECK BLOWER FAN MOTOR
A CHECK SHORTING STICKS
A CHECK PRIMARY AND LOAD SERVO ASSEMBLY COIL, COIL
SHAFT ASSEMBLIES, GEARS, COIL ROLLERS, THE PRIMARY
SERVO ASSEMBLY, AND THE LOAD COIL
A CHECK THE SECONDARY SERVO-DRIVE ASSEMBLY GEAR TRAIN
A LUBRICATE DRIVE AND COIL ASSEMBLIES
A CLEAN RELAY CONTACTS
A CLEAN AMPLIFIER TUBE SOCKETS (REMOVE/REPLACE TUBES)
A CLEAN COILS
K INTERPRET BITE ERROR CODES AND DETERMINE FALSE OR
ERRONEOUS CODES
K INTERPRET COMMERCIAL MAINTENANCE MANUALS (PECULIAR TO
GRC-212 GIANT TALK SYSTEM)
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

TASK #: 01760
TROUBLESHOOT AN/GRC-212 HF/ISB AM-7125 LINEAR POWER AMPLIFIER (LPA)
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES (COMPLEXITY OF EQUIPMENT REQUIRES 24-30
MONTHS WITHOUT COURSE E3AZR30454-039), NO
(EQUIPMENT REQUIRES ELECTRONIC FUNDAMENTALS
AND TEST EQUIPMENT)
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 5
EQUIPMENT:
TOOL KIT, SOLDERING KIT, TS-8021 TEST SET, DIGITAL MULTIMETER,
SIGNAL GENERATOR, DUMMY LOADS, AUDIO OSCILLATOR, SPECTRUM
ANALYZER, HF-8014A EXCITER, CONTROL CABLE, CARD EXTENDER,
RF VOLTMETER, RF VECTOR IMPEDANCE METER, MICROMANOMETER, TEST
ADAPTERS, DIRECTIONAL COUPLER, 50 OHM TERMINATOR, OSCILLOSCOPE
REFERENCES:
T.O. 31R2-2-GRC212-92
T.O. 31R2-2-GRC212-94

CONDITIONS CUES:

COND: IN-SHOP, ON-BENCH, POWER ON/OFF, 2-MAN
CUE: PMI FINDING, OPERATION COMPLAINT

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0377 6.07 43.0 44.0 41.0 20.0 6.55 12.0
304X4 H 0404 4.58 22.0 22.0 23.0 13.0 4.02 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A ISOLATE FAULTY MODULES AND LINE REPLACEABLE UNITS (LRU)
- A REMOVE/REPLACE LPA MODULES, CIRCUIT CARDS, AND ASSOCIATED SUPPORTING COMPONENTS/PARTS
- A PERFORM OPERATION CHECK WITH BITE
- A VERIFY OPERATION OF HF-8014A EXCITER
- A PERFORM BITE SELF-CHECK
- K INTERPRET BITE ERROR CODES AND DETERMINE FALSE OR ERRONEOUS CODES
- K RECOGNIZE CARBON ARCING OF HIGH POWER ELECTRON TUBE SOCKETS
- K INTERPRET COMMERCIAL MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)
- K PERFORM ALGEBRAIC EQUATIONS

OSR JOB INVENTORY TASK STATEMENTS:

4 H0377 K ISOLATE MALFUNCTIONS WITHIN SIDE BAND EQUIPMENT
4 H0404 A REMOVE OR INSTALL SIDE BAND SYSTEM LRU

TASK #: 01770

ALIGN/ADJUST AN/GRC-212 HF/ISB AM-7125 LINEAR POWER AMPLIFIER (LPA)

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: BI-MONTHLY

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS

QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS

TNG REFERENCE(S): QTP 304X4-30NA

TTT: NONE

SME OPINION: 5

EQUIPMENT:

TOOL KIT, TS-8021 TEST SET, DIGITAL MULTIMETER,
SIGNAL GENERATOR, DUMMY LOADS, AUDIO OSCILLATOR, SPECTRUM
ANALYZER, HF-8014A EXCITER, CONTROL CABLE, CARD EXTENDER,
RF VOLTMETER, RF VECTOR IMPEDANCE METER, MICROMANOMETER, TEST
ADAPTERS, 50 OHM TERMINATOR

REFERENCES:

T.O. 31R2-2-GRC212-92

CONDITIONS CUES:

COND: IN-SHOP, ON-BENCH, POWER ON/OFF, 2-MAN IN-SHOP
CUE: PMI FINDING, OPERATOR COMPLAINT, PARTS REPLACEMENT,
FOLLOW-UP POTENTIOMETER FAILURE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM STATIC TUBE ADJUSTMENT
- A ALIGN/ADJUST PA TUBE NEUTRALIZATION
- A ALIGN/ADJUST RF FEEDBACK
- A ALIGN/ADJUST TUNE POWER
- A ALIGN/ADJUST COIL LOADING
- A ALIGN/ADJUST RF DETECTOR VOLTAGE
- A ALIGN/ADJUST LIMITER/LEVEL CONTROL (ADL/ALC)
- A ALIGN/ADJUST TRANSMITTER GAIN CONTROL
- A ALIGN/ADJUST RF OVER-VOLTAGE DETECTOR
- A ALIGN/ADJUST LOAD COIL OVERVOLTAGE DETECTOR
- A ALIGN/ADJUST VSWR OVERLOAD
- A ALIGN/ADJUST AIR PRESSURE SWITCH
- A ALIGN/ADJUST DRIVER TUNING DRIVE
- A ALIGN/ADJUST PRIMARY TUNING DRIVE
- A ALIGN/ADJUST SECONDARY TUNING DRIVE
- A ALIGN/ADJUST LOADING COIL DRIVE
- A ALIGN/ADJUST DRIVE-FA INTERSTAGE SYNCHRONIZATION
- A ALIGN/ADJUST RF TUNING COIL ASSEMBLY SYNCHRONIZATION
- A ALIGN/ADJUST SECONDARY CAPACITOR 1C14 TO 1A15 SUBASSEMBLY SYNCHRONIZATION
- A ALIGN/ADJUST LOADING COIL SYNCHRONIZATION
- A ALIGN/ADJUST BLOWER PULLEY
- K INTERPRET COMMERCIAL MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212
GIANT TALK SYSTEM)

OSR JOB INVENTORY TASK STATEMENTS:

4 J0497 A ALIGN SIDE BAND EQUIPMENT

TASK #: 01780
TROUBLESHOOT AN/GRC-212 HF/ISB AM-7125 LINEAR POWER AMPLIFIER (LPA) POWER SUPPLY UNIT 2
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 5
EQUIPMENT:
TOOL KIT, DIGITAL MULTIMETER, SOLDERING KIT, BITE,
ANALOG MULTIMETER
REFERENCES:
T.O. 31R2-2-GRC212-92
T.O. 31R2-2-GRC212-94
CONDITIONS CUES:
COND: IN-SHOP, ON-BENCH, POWER ON/OFF
CUE: PMI FINDING, FAILED LPA COMPONENT, OPERATOR COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATION CHECK WITH BITE
A INTERPRET BITE ERROR CODES AND DETERMINE LOCATION OF PROBLEM (LPA/POWER SUPPLY)
A REMOVE REPLACE POWER SUPPLY SUBASSEMBLIES, COMPONENTS, AND ASSOCIATED PARTS
A ALIGN/ADJUST LPA LRU, ASSEMBLIES, AND/OR COMPONENTS EFFECTED BY POWER SUPPLY ASSEMBLY REPLACEMENT
K INTERPRET COMMERCIAL MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)
OSR JOB INVENTORY TASK STATEMENTS:
4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS

TASK #: 01790
TROUBLESHOOT AN/GRC-212 HF/ISB MP-100 COMPUTER SYSTEM
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 3
EQUIPMENT:
TOOL KIT, DISK DRIVE WITH DIAGNOSTIC SOFTWARE AND COMPUTER
REFERENCES:
T.O. 31R2-2-2GRC212-1171
CONDITIONS CUES:
COND: IN-SHOP, POWER ON
CUE: OPERATOR COMPLAINT, FAILURE OF COMPUTER SYSTEM TO DETECT PROBLEMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 L 0613 1.98 8.0 12.0 12.0 9.0 4.17 2.0
ACTIVITIES SKILL KNOWLEDGE:
A RUN DIAGNOSTIC SOFTWARE AND EVALUATE RESULTS
K INTERPRET ERROR CODES AND IDENTIFY LOCATION OF CIRCUIT CARDS
K ISOLATE FAULTY DISK DRIVE
K ISOLATE FAULTY DM-30 VIDEO DISPLAY TERMINAL
K ISOLATE FAULTY COMPUTER
K ISOLATE FAULTY PRINTER
K ISOLATE FAULTY MODEM
K ISOLATE FAULTY TRANSMIT BITE SWITCH
K ISOLATE FAULTY IEEE INTERFACE
A REMOVE/REPLACE COMPUTER CIRCUIT CARDS AND ASSOCIATED COMPONENTS
K INTERPRET COMMERCIAL MAINTENANCE MANUALS (PECULIAR
OSR JOB INVENTORY TASK STATEMENTS:
4 L0613 A REMOVE OR INSTALL BUILT-IN OR SPECIAL TEST EQUIPMENT COMPONENTS

TASK #: 01800
TROUBLESHOOT AN/GRC-212 HF/ISB 580 DSS ELECTRONIC SWITCH
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NO, INSUFFICIENT DETAIL AND TESTS
TNG REFERENCE(S): QTP 304X4-30NA
TTT: NONE
SME OPINION: 5
NO INSPECTION EXCEPT FOR CORROSION ON DAY 56. COMPUTERIZED BITE MANAGES SYSTEM AND REPORTS PROBLEMS. ALL SUBASSEMBLIES ARE REDUNDANT. NO EQUIPMENT ALIGNMENTS
EQUIPMENT:
COMPUTERIZED BITE (WITH PRINTER), WIRE WRAPPING MATERIAL, DIGITAL MULTIMETER (CHECK BAD CABLES), DM-30 VIDEO DISPLAY TERMINAL (VDT), TOOL KIT
REFERENCES:
T.O. 31R2-2GRC212-1081
CONDITIONS CUES:
COND: IN-SHOP, POWER ON
CUE: BITE COMPUTER PRINTOUT, OPERATOR COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0402 3.17 7.0 7.0 8.0 5.0 3.89 7.0
ACTIVITIES SKILL KNOWLEDGE:
A DETERMINE IF PROBLEM IS SOFTWARE/HARDWARE (INTERFACE, COMMON, OR ATTENDANT TURRET)
A CHECK AND CORRECT LOCKOUT CONDITION
A REBOOT COMPUTER SOFTWARE AND MONITOR RESULTS
A PERFORM SWITCH FAULT ISOLATION TO IDENTIFY CIRCUIT CARD OPERATIONAL CHECKS (MANUAL CIRCUIT CARD TEST)
K INTERPRET COMPUTER BITE ERROR CODES FROM PRINTOUT AND LOCATE BITE IDENTIFIED CIRCUIT CARDS
K TROUBLESHOOT DMARK (TERMINAL TEST POINT)
K ISOLATE FAULTY CABLES OR CONNECTORS
K ISOLATE FAULTY SOFTWARE
K ISOLATE FAULTY CIRCUIT CARDS
K ISOLATE FAULTYCLOCKS
K ISOLATE FAULTY PERIPHERAL COMPUTER EQUIPMENT
A REMOVE/REPLACE SWITCH CIRCUIT CARDS, TURRET, AND ASSOCIATED COMPONENTS
K INTERPRET FUNCTIONALLY ORIENTATED MAINTENANCE MANUALS (PECULIAR TO AN/GRC-212 GIANT TALK SYSTEM)
OSR JOB INVENTORY TASK STATEMENTS:
4 H0402 A REMOVE OR INSTALL RADIO-TELEPHONE SYSTEM LRU

TASK #: 01810
INSPECT AN/GRR-23 VHF RECEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: 336
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
QTP REFERENCE(S): QTP 304X4-30C
TTT: 3
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR, 427A VOLTMETER, DIGITAL VOLTMETER, 600 OHM HEADPHONE, FREQUENCY COUNTER, SUBMINIATURE RF CONNECTOR/ADAPTER, TOOL BOX, CLEANING SUPPLIES
REFERENCES:
T.O.31R2-2GRR-116WC-1
CONDITIONS CUES:
COND: CONTROL TOWER, RECEIVER SITE, DAY, NIGHT, EQUIPMENT RELEASED
CUES: PMI SCHEDULE, SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCE

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0393 6.33 53.0 50.0 43.0 27.0 4.23 18.0
304X4 J 0527 6.35 38.0 33.0 28.0 15.0 5.94 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT POWER SUPPLY
- A CHECK TEST POINT READINGS
- A INSPECT ELECTRICAL FREQUENCY SYNTHESIZER FREQUENCY
- A INSPECT EQUIPMENT FOR OBVIOUS DEFECTS TO INCLUDE
CABLE CONNECTORS AND LEADS
- A INSPECT CABLE CONNECTORS/LEADS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0527 A BENCH CHECK VHF RECEIVERS
- 4 H0393 A OPERATIONALLY CHECK VHF EQUIPMENT

TASK #: 01820

TROUBLESHOOT AN/GRR-23 VHF RECEIVER

DUTY CODE: X4

TASK STATUS: 3-K

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MAJOR, DAMAGE, NONE

HOW OFTEN: 180

OJT TRAINABLE: YES

QTP ADEQUATE: YES

QTP REFERENCE(S): QTP 304X4-30C

TTT: 3

SME OPINION: 3

EQUIPMENT:

DISTORTION ANALYZER, SIGNAL GENERATOR, 427A VOLTMETER, DIGITAL VOLTMETER, 600 OHM HEADSET, FREQUENCY COUNTER, SUBMINIATURE RF CONNECTOR/ADAPTER, TOOL BOX, AUDIO OSCILLATOR, EXTENSION CABLE SET, SOLDERING KIT

REFERENCES:

T.O. 31R2-2GRR-112

CONDITIONS CUES:

COND: CONTROL TOWER, RECEIVER SITE, MAINTENANCE SHOP, DAY,
NIGHT, EQUIPMENT RELEASED

CUES: PMI FINDINGS, SYSTEM MALFUNCTIONS

JOB STANDARDS:

IAW REFERENCE

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0379 6.55 49.0 47.0 41.0 23.0 6.39 12.0
304X4 J 0542 5.77 49.0 45.0 39.0 22.0 5.05 12.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY SUBASSEMBLIES
- K ISOLATE FAULTY CIRCUITS
- K ISOLATE FAULTY COMPONENTS OR PARTS
- A REMOVE AND REPLACE SUBASSEMBLIES
- A REMOVE AND REPLACE COMPONENTS OR PARTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0379 K ISOLATE MALFUNCTIONS WITHIN VERY HIGH FREQUENCY (VHF)
EQUIPMENT
- 4 J0542 A REMOVE OR INSTALL VHF EQUIPMENT PARTS

TASK #: 01830
ALIGN/ADJUST AN/GRR-23 VHF RECEIVER
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: 180
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30C
TTT: 3
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR, 427A VOLTMETER, DIGITAL MULTIMETER, 600 OHM
HEADPHONE, FREQUENCY COUNTER, SUBMINIATURE RF CONNECTOR/
ADAPTER, TOOL BOX, CLEANING SUPPLIES
REFERENCES:
T.O.31R2-2GRR-112
CONDITIONS CUES:
COND: CONTROL TOWER, RECEIVER SITE, DAY, NIGHT, EQUIPMENT
RELEASED
CUES: PMI SCHEDULE, SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCE
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0500 6.72 50.0 47.0 40.0 22.0 6.10 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST SQUELCH
A ADJUST AUTOMATIC GAIN CONTROL (AGC)
A ADJUST AUDIO MAIN LEVEL
A ADJUST AF PREAMPLIFIER
A ADJUST COMPRESSION LEVEL
OSR JOB INVENTORY TASK STATEMENTS:
4 J0500 A ALIGN VERY HIGH FREQUENCY (VHF) EQUIPMENT

TASK #: 01840
INSPECT AN/GRR-24 UHF RECEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: 336
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30C
TTT: 3
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR, 427A VOLTMETER, DIGITAL VOLTMETER, 600 OHM
HEADPHONE, FREQUENCY COUNTER, SUBMINIATURE RF CONNECTOR,
ADAPTER, TOOL BOX, CLEANING SUPPLIES
REFERENCES:
T.O. 31R2-2GRR-116HC-1
CONDITIONS CUES:
COND: CONTROL TOWER, RECEIVER SITE, DAY, NIGHT, EQUIPMENT
RELEASED
CUES: PMI SCHEDULE, SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCE
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0392 6.63 70.0 64.0 55.0 32.0 4.30 18.0
304X4 J 0523 6.60 52.0 44.0 36.0 19.0 5.87 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT POWER SUPPLY
A CHECK TEST POINT READINGS
A INSPECT ELECTRICAL FREQUENCY SYNTHESIZER FREQUENCY
A INSPECT EQUIPMENT FOR OBVIOUS DEFECT TO INCLUDE CABLE
CONNECTORS AND LEADS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0523 A BENCH CHECK UHF RECEIVERS
4 H0392 A OPERATIONALLY CHECK UHF EQUIPMENT

TASK #: 01850
TROUBLESHOOT AN/GRR-24 UHF RECEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: 180
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30C
TTT: 3
SME OPINION: 3
EQUIPMENT:
DISTORTION ANALYZER, SIGNAL GENERATOR, 427A VOLTMETER, DIGITAL VOLTMETER, 600 OHM HEADPHONE, FREQUENCY COUNTER, SUBMINIATURE RF CONNECTOR, ADAPTER, TOOL BOX, AUDIO OSCILLATOR, EXTENSION CABLE SET, SOLDERING KIT
REFERENCES:
T.O. 31R2-2GRR-112
CONDITIONS CUES:
COND: CONTROL TOWER, RECEIVER SITE, MAINTENANCE SHOP, DAY, NIGHT, EQUIPMENT RELEASED
CUES: PMI FINDINGS, SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCE
OSR DATA: TASK TE 1'OB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 6 7 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 1.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE AF AMPLIFIER
K ISOLATE POWER SUPPLY
K ISOLATE IF AMPLIFIER
K ISOLATE MIXER/MULTIPLIER
K ISOLATE LIMITER
K ISOLATE PREAMPLIFIER
K ISOLATE SYNTHESIZER
A REMOVE/REPLACE SUBASSEMBLIES, CIRCUIT CARDS, AND RELATED COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 01860
ALIGN/ADJUST AN/GRR-24 UHF RECEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: 180
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30C
TTT: 3
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR, 427A VOLTMETER, DIGITAL VOLTMETER, 600 OHM HEADPHONE, FREQUENCY COUNTER, SUBMINIATURE RF CONNECTOR, ADAPTER, TOOL BOX, CLEANING SUPPLIES
REFERENCES:
T.O. 31R2-2GRR-112
CONDITIONS CUES:
COND: CONTROL TOWER, RECEIVER SITE, DAY, NIGHT, EQUIPMENT RELEASED
CUES: PMI SCHEDULE, SYSTEM MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCE
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST SQUELCH
A ADJUST AUTOMATIC GAIN CONTROL (AGC)
A ADJUST AUDIO MAIN LEVEL
A ADJUST AF PREAMPLIFIER
A ADJUST COMPRESSION LEVEL
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 01870
INSPECT AN/GRT-21 VHF AND AN/GRT-22 UHF TRANSMITTERS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 168, 336
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO (INACCURATE 168/336 DAY PMI PREREQUISITES)
TNG REFERENCE(S): QTP 304X4-30B
TTT: 3
SME OPINION: 3
EQUIPMENT:
FREQUENCY COUNTER, TOOL KIT, RF WATTMETER, DUMMY LOAD, AUDIO
OSCILLATOR, CABLES, VARIABLE ATTENUATOR, OSCILLOSCOPE,
RF GENERATOR
REFERENCES:
T.O. 31R2-2GRT-106WC-1
CONDITIONS CUES:
COND: ON BENCH/USER SITE, POWER ON/OFF, TRANSMITTER DOWN
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0525 6.50 49.0 39.0 31.0 15.0 5.97 12.0
304X4 J 0529 6.15 36.0 30.0 23.0 11.0 6.00 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A PERFORM MINIMUM PERFORMANCE TEST
A PERFORM FREQUENCY CHECK
A CLEAN EXTERIOR OF TRANSMITTER ON RACK
OSR JOB INVENTORY TASK STATEMENTS:
4 J0525 A BENCH CHECK UHF TRANSMITTERS
4 J0529 A BENCH CHECK VHF TRANSMITTERS

TASK #: 01880
TROUBLESHOOT AN/GRT-21 VHF AND AN/GRT-22 UHF TRANSMITTERS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30B
TTT: 3
SME OPINION: 3
DEPOT REPAIRS CARRIER MODULES TO COMPONENT LEVEL
EQUIPMENT:
TOOL KIT, DUMMY LOAD, ELECTRONIC PLUG-IN UNITS, RF POWER
METER WITH ELEMENTS, OSCILLOSCOPE, FREQUENCY COUNTER, DIGITAL
MULTIMETER, CAPACITOR TESTER (NON T.O. EQUIPMENT), QUARTZ CRYSTAL
CARD EXTENDER, RF GENERATOR, AUDIO OSCILLATOR, VARIABLE
ATTENUATOR, DOUBLE BALANCED MIXER, SOLDERING STATION
REFERENCES:
31R2-2GRT-102
CONDITIONS CUES:
COND: IN-SHOP/USER SITE, POWER ON/OFF, EQUIPMENT OFF-LINE
CUE: PMI FINDING, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES, OPTIMIZE TRANSMITTER BEYOND T.O. PARAMETERS
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 H 0379 6.55 49.0 47.0 -1.0 23.0 6.39 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY LRU
K ISOLATE FAULTY CIRCUIT CARDS
K ISOLATE FAULTY COMPONENTS OR MINOR HARDWARE
A REMOVE/REPLACE LRU
A REMOVE/REPLACE CIRCUIT CARDS
A REMOVE/REPLACE COMPONENTS OR MINOR HARDWARE
OSR JOB INVENTORY TASK STATEMENTS:
4 H0578 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 H0379 K ISOLATE MALFUNCTIONS WITHIN VERY HIGH FREQUENCY (VHF)
EQUIPMENT

TASK #: 01890
ALIGN/ADJUST AN/GRT-21 VHF AND AN/GRT-22 UHF TRANSMITTERS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-30B
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, DUMMY LOAD, RF POWER METER WITH ELEMENTS, OSCILLOSCOPE,
FREQUENCY COUNTER, DIGITAL MULTIMETER, CAPACITOR TESTER, (NON
T.O EQUIPMENT), QUARTZ CRYSTAL, CARD EXTENDER, RF GENERATOR,
AUDIO OSCILLATOR, VARIABLE ATTENUATOR, DOUBLE BALANCED MIXER
REFERENCES:
T.O. 31R2-2GRT-102
CONDITIONS/CUES:
COND: IN-SHOP/USER SITE, POWER ON/OFF, TRANSMITTER OFF-LINE
CUE: PMI FINDING, USER COMPLAINT, FAILED MODULE/COMPONENT
JOB STANDARDS:
OPTIMIZE (TUNE) TRANSMITTER BEYOND T.O. PARAMETERS
OSR DATA:

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI		
	304X4	J	0499	6.78	63.0	60.0	51.0	26.0	6.13	18.0
		J	0500	6.72	50.0	47.0	40.0	22.0	6.10	12.0

ACTIVITIES SKILL KNOWLEDGE:

- A ALIGN/ADJUST A1 AUDIO AMPLIFIER OR COMPRESSOR CIRCUIT CARD/PARTS
- A ALIGN/ADJUST A4 FILTER AMPLIFIER DETECTOR CIRCUIT CARD/PARTS
- A ALIGN/ADJUST A5 BUFFER MODULATOR CIRCUIT CARD/PARTS
- A ALIGN/ADJUST A6 RADIO FREQUENCY CONTROL MODULATOR CIRCUIT CARD/PARTS
- A ALIGN/ADJUST A7 CONTROL THERMAL DETECTOR MODULATION PERCENTAGE/COAXIAL RELAY CONTROL/KEYER INHIBIT CIRCUIT CARD/PART
- A ALIGN/ADJUST A8 OSCILLATOR SYNTHESIZER MODULE
- A ALIGN/ADJUST A9 RADIO FREQUENCY MULTIPLIER MODULE
- A ALIGN/ADJUST A10 DRIVER POWER AMPLIFIER MODULE
- A ALIGN/ADJUST PS1A2 AND PS1A3 POWER SUPPLY CIRCUIT CARDS

OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT
4 J0500 A ALIGN VERY HIGH FREQUENCY (VHF) EQUIPMENT

TASK #: 01900
INSPECT GSB-900/R PORTABLE HF RADIO
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 336
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO
TNG REFERENCE(S): COMMERCIAL MANUAL; LWC 1985CS-GSB 900/R
TTT: 5
SME OPINION: 3
THIS SYSTEM IS SIMILAR TO URC-92.
EQUIPMENT:
DIGITAL VOLTMETER, RF SIGNAL GENERATOR, AUDIO UTUM, IN LINE FUSE,
COAXIAL CABLE-RG 58, REMOTE UNIT INTERCONNECTS, JUMP WIRES,
BANANA TO PHONE PLUG TEST CABLE, RF VTVM, AUDIO OSCILLATOR,
EXTENDER CARDS, CW KEYS, RF WATTMETER, COMMON SCREWDRIVER, LINT
FREE CLOTH, DENATURED ALCOHOL, NON-METALLIC TIPPED VACUUM,
REFLECTOMETER
REFERENCES:
COMMERCIAL MANUAL; LWC 1985CS-GSB 900/R
CONDITIONS/CUES:
COND: INSIDE
CUE: PMI LISTING
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK UPPER/LOWER SIDE BAND SENSITIVITY
- A CHECK AM SENSITIVITY
- A CHECK AGC CONTROL
- A CHECK 600 OHM AUDIO OUTPUT

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 01910

TROUBLESHOOT GSB-900/R PORTABLE HF RADIO

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: ONCE A YEAR

OJT TRAINABLE: YES, NO

QTP ADEQUATE: NO

TNG REFERENCE(S): COMMERCIAL MANUAL

TTT: 5

SME OPINION: 3

EQUIPMENT:

SIGNAL GENERATOR, DIGITAL VOLTMETER, AC VOLTMETER, UTUM,
WATT METER, DUMMY LOAD, RF CABLES, INTERCONNECT CABLES,
EXTENDER CARD, SPEAKER, CARD PULLER, HANDTOOLS,
SOLDERING EQUIPMENT, CARD HOLDER, GOGGLES, REFLECTOMETER

REFERENCES:

COMMERCIAL MANUAL

CONDITIONS CUES:

COND: INSIDE, REMOVE TO SHOP; GROUNDED

CUE: NO TRANSMIT/RECEIVE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0505 6.23 28.0 31.0 32.0 17.6 5.65 12.0
304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK POWER OUTPUT TO IDENTIFY TROUBLE
- A CHECK TO SEE IF UNIT IS RECEIVING
- K ISOLATE FAULTY CARD USING FLOW CHART
- A REMOVE AND REPLACE FAULTY CARD

A REMOVE AND REPLACE FAULTY COMPONENT

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0505 A BENCH CHECK HF RECEIVERS

- 4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS

TASK #: 01920

INSPECT AN/GSC-37 COMMUNICATIONS TERMINAL

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, NONE, NONE

HOW OFTEN: 28, 84, 168, 336

OJT TRAINABLE: YES, NO, REQUIRES ELECTRONICS BACKGROUND AND USE
OF TEST EQUIPMENT

QTP ADEQUATE: NO.

TNG REFERENCE(S): AFCC CEMI 321-32, T.O. 31W2-2GSC37-2

TTT: 5

SME OPINION: 5

NOTE: THE ANGSC-37 COMMUNICATION CONTROL AND DISTRIBUTION SYSTEM
(CCDS) CONSISTS OF SEVERAL OPERATOR POSITIONS; ASR, PAR,
MAINT, AND ASSISTANT OPERATOR POSITIONS. THEIR
SUBCOMPONENTS IDENTICAL, SO ONLY ONE OPERATOR POSITION
HAS ANALYZED.

EQUIPMENT:

LINT FREE CLOTH, VACUUMS, BRUSH, DIGITAL VOLTMETER, TEST BOX 1,
BRIDGING TRANSFORMERS(6), AUDIO OSCILLATOR, DISTORTION ANALYZER,
VACUUM TUBE VOLTMETER OR EQUIVALENT(5), SPRAY AND WIPE SOLUTION,
TRI-PACK TELEPHONE TEST SET, TEST CABLES, REQUEST/ACKNOWLEDGE
INTERCOM, HANDTOOLS, ANALOG MULTIMETER, CAPACITOR TESTER,
OSCILLOSCOPE, SOLDERING KIT

REFERENCES:

AFCC CEMI 321-32
T.O. 31W2-2GSC37-2

CONDITIONS CUES:

COND: INDOORS, EQUIPMENT MUST BE DOWN (RELEASED BY OPERATION)

CUE: PMI SCHEDULE

JOB STANDARDS:

IAH REFERENCES

OSR DATA:	TASK	TE	IJOB	1EML	5SKL	7SKL	TD	ATI	
304X4	H	0386	4.67	48.0	44.0	39.0	20.0	4.32	12.0
304X4	I	0452	4.42	41.0	37.0	31.0	15.0	3.44	12.0
304X4	I	0462	3.40	18.0	18.0	18.0	10.0	3.31	7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CLEAN EQUIPMENT
- A CHECK INTERCOM CIRCUIT
- A CHECK MONITOR CIRCUIT
- A CHECK PBX LINE
- A CHECK AUTOMATIC SIGNALING UNIT
- A CHECK VOICE PAGE LINE
- A CHECK SELECTIVE SIGNALING LINE
- A CHECK REQUEST/ACKNOWLEDGE CIRCUIT
- A CHECK REQUEST/ACKNOWLEDGE INTERCOM AUDIO AND LIGHT
TEST
- A CHECK BATTERY BACKUP OPERATIONAL TEST
- A CHECK POWER SUPPLY
- A CHECK TRANSMIT SYSTEM PERFORMANCE
- A CHECK RECEIVE SYSTEM PERFORMANCE
- A CHECK RECEIVE AMPLIFIER UNIT PERFORMANCE
- A CHECK HEADPHONE AMPLIFIER PERFORMANCE
- A CHECK SPEAKER AMPLIFIER PERFORMANCE
- A CHECK MONITOR AMPLIFIER PERFORMANCE
- A CHECK MICROPHONE AMPLIFIER PERFORMANCE
- A CHECK LINE AMPLIFIER/TERMINATOR UNIT TRANSMIT PER-
FORMANCE
- A CHECK LINE AMPLIFIER/TERMINATOR UNIT RECEIVE PERFORM-
ANCE

OSR JOB INVENTORY TASK STATEMENTS:

4 I0452 A OPERATIONALLY CHECK COMMUNICATIONS PATCH PANELS

4 H0386 A OPERATIONALLY CHECK MULTIPLE CHANNEL EQUIPMENT

4 I0462 A OPERATIONALLY CHECK PHONE PATCH SYSTEMS

TASK #: 01930
TROUBLESHOOT AN/GSC-37 COMMUNICATIONS TERMINAL OPERATOR POSITION LANDLINE SELECTOR UNIT
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: AS REQUIRED
OJT TRAINABLE: YES, NO, REQUIRES ELECTRONICS PRINCIPLES
QTP ADEQUATE: NO
TNG REFERENCE(S): T.O. 31WZ-2GSC37-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, HANDBOOLS, SOLDERING EQUIPMENT,
TRANSISTOR CHECKER, TEST EQUIPMENT, ANALOG MULTIMETER
REFERENCES:
T.O. 31WZ-2GSC37-2
CONDITIONS CUES:
COND: INDOORS, EQUIPMENT MUST BE DOWN (RELEASED BY OPERATION)
CUE: PMI SCHEDULE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0430 3.33 9.0 11.0 11.0 7.0 4.95 7.0
304X4 I 0481 2.17 7.0 9.0 8.0 5.0 3.69 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATIONAL CHECK OF LANDLINE SELECTOR UNIT
K ISOLATE FAULTY PRINTED CIRCUIT BOARD
K ISOLATE FAULTY COMPONENTS
A REMOVE AND REPLACE PRINTED CIRCUIT BOARD
A REMOVE AND REPLACE FAULTY COMPONENT
K RECALL PARTS REQUISITION
OSR JOB INVENTORY TASK STATEMENTS:
4 I0430 K ISOLATE MALFUNCTIONS WITHIN INTERCOM SYSTEMS TO LRU
4 I0481 A REMOVE OR INSTALL INTERCOM EQUIPMENT LRU

TASK #: 01940
TROUBLESHOOT AN/GSC-37 COMMUNICATIONS TERMINAL OPERATOR POSITION (INCLUDES MAINTENANCE, ASR, PAR, SUP)
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY
OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC PRINCIPLES, KNOWLEDGE OF HOW TO USE T.O., AND SYSTEM THEORY OF OPERATION
QTP ADEQUATE: NO
TNG REFERENCE(S): T.O. 31W2-2GSC37-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
COMMON HANDBOOLS, DIGITAL MULTIMETER, AUDIO OSCILLATOR,
TRI-PACK TELEPHONE TEST SET, OSCILLOSCOPE
REFERENCES:
T.O. 31W2-2GSC37-2
CONDITIONS CUES:
COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW RELEASE OF ALL POSITIONS. WEATHER-NO MAINTENANCE PERFORMED WITH LIGHTNING IN AREA. FLYING MISSION DICTATES WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.
CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED DURING PMI.
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0430 3.33 9.0 11.0 11.0 7.0 4.95 7.0
304X4 I 0481 2.17 7.0 9.0 8.0 5.0 3.69 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES
K ISOLATE FAULTY LINE REPLACEABLE UNITS (LRU)
K ISOLATE FAULTY MECHANICAL PARTS
A REMOVE AND REPLACE LRU AND MECHANICAL PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0430 K ISOLATE MALFUNCTIONS WITHIN INTERCOM SYSTEMS TO LRU
4 I0481 A REMOVE OR INSTALL INTERCOM EQUIPMENT LRU

TASK #: 01950
TROUBLESHOOT AN/GSC-37 COMMUNICATION TERMINAL POSITION CONSOLE AMPLIFIER

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: AS REQUIRED

OJT TRAINABLE: YES, NO, REQUIRES THEORY OF OPERATION AND EXPERIENCE

QTP ADEQUATE: NO

TNG REFERENCE(S): T.O. 31W2-2GSC37-2

TTT: 5

SME OPINION: 5

EQUIPMENT:

FLATBLADE SCREWDRIVER, DIGITAL MULTIMETER, TRANSISTOR CHECKER, OSCILLOSCOPE (DUAL TRAN), SOLDERING EQUIPMENT, TEST EQUIPMENT, ANALOG MULTIMETER

REFERENCES:

T.O. 31W2-2GSC37-2

CONDITIONS CUES:

COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW RELEASE OF ALL POSITIONS. WEATHER-NO MAINTENANCE PERFORMED WITH LIGHTNING IN THE AREA. FLYING MISSION DICTATES WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.

CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED DURING PMI.

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0432 3.17 11.0 13.0 13.0 6.0 5.22 7.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY PCB

K ISOLATE FAULTY MOTHERBOARD

K ISOLATE PATCH CONNECTORS

A REQUISITION PARTS

OSR JOB INVENTORY TASK STATEMENTS:

4 I0432 K ISOLATE MALFUNCTIONS WITHIN PHONE PATCH SYSTEMS TO LRU

TASK #: 01960

TROUBLESHOOT AN/GSC-37 COMMUNICATION TERMINAL OPERATOR POSITION RADIOPHONE SELECTOR MODULE

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, NONE

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC PRINCIPLES

QTP ADEQUATE: NO

TNG REFERENCE(S): T.O. 31W2-2GSC37-2

TTT: 5

SME OPINION: 5

EQUIPMENT:

DIGITAL MULTIMETER, HANDSET, HANDBOOLS, SOLDERING EQUIPMENT, BUTT SET, CAPACITOR TESTER, OSCILLOSCOPE

REFERENCES:

T.O. 31W2-2GSC37-2

CONDITIONS CUES:

COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW RELEASE OF ALL POSITIONS. WEATHER-NO MAINTENANCE PERFORMED WITH LIGHTNING IN THE AREA. FLYING MISSION DICTATES WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.

CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED DURING PMI.

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0578 3.30 8.0 9.0 10.0 5.0 5.19 7.0
304X4 K 0599 3.28 26.0 24.0 21.0 8.0 4.87 7.0

ACTIVITIES SKILL KNOWLEDGE:

A REQUISITION PARTS

K ISOLATE FAULTY PRINTED CIRCUIT BOARD, OR PATCHCORD

A REMOVE/REPLACE CIRCUIT BOARD AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:

4 K0578 A BENCH CHECK PHONE PATCH SYSTEM COMPONENTS

4 K0599 A REMOVE OR INSTALL OPERATOR CONSOLE DISCRETE PARTS

TASK #: 01970
TROUBLESHOOT AN/GSC-37 COMMUNICATION TERMINAL OPERATOR POSITION INTERCOM SELECTOR UNIT 1

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: NONE, DAMAGE, NONE

HOW OFTEN: AS REQUIRED

OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC PRINCIPLES

QTP ADEQUATE: NO

TNG REFERENCE(S): T.O. 31W2-2GSC37-2

TTT: 5

SME OPINION: 5

EQUIPMENT:

DIGITAL MULTIMETER, SOLDERING EQUIPMENT, TRANSISTOR CHECKER,
HANDTOOLS, OSCILLOSCOPE, CAPACITOR TESTER

REFERENCES:

T.O. 31W2-2GSC37-2

CONDITIONS CUES:

COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW RELEASE OF ALL POSITIONS. FLYING MISSION DICTATES WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.

CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED DURING PMI.

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 N 0648 1.52 .0 1.0 1.0 1.0 6.71 2.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY CIRCUIT BOARD
K ISOLATE FAULTY MOTHERBOARD
K ISOLATE FAULTY CONNECTORS
K ISOLATE FAULTY RELAY IN CONSOLE AMPLIFIER SUBASSEMBLY
K TROUBLESHOOT DEFECTIVE COMPONENTS
A REMOVE AND REPLACE CIRCUIT CARDS
A REMOVE AND REPLACE DEFECTIVE COMPONENTS AND PARTS

(SR JOB INVENTORY TASK STATEMENTS:

4 N0648 K ISOLATE MALFUNCTIONS WITHIN RADIO TYPE MAINTENANCE NETWORK (RTMN)

TASK #: 01980

TROUBLESHOOT AN/GSC-37 COMMUNICATION TERMINAL OPERATOR POSITION OPERATOR'S JACKBOX

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, NONE

HOW OFTEN: AS REQUIRED

OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC PRINCIPLES

QTP ADEQUATE: NO

TNG REFERENCE(S): T.O. 31W2-2GSC37-2

TTT: 5

SME OPINION: 3

EQUIPMENT:

HANDTOOLS, SOLDERING KIT, DIGITAL MULTIMETER, TEST EQUIPMENT

REFERENCES:

T.O. 31W2-2GSC37-2

CONDITIONS CUES:

COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW RELEASE OF ALL POSITIONS. FLYING MISSION DICTATES WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.

CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED DURING PMI.

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0599 3.23 26.0 24.0 21.0 8.0 4.87 7.0
304X4 K 0576 3.67 23.0 21.0 17.0 8.0 5.15 11.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE DEFECTIVE COMPONENTS
A REMOVE AND REPLACE DEFECTIVE COMPONENTS
A REQUISITION PARTS

(SR JOB INVENTORY TASK STATEMENTS:

4 K0576 A BENCH CHECK OPERATOR CONSOLE COMPONENTS

4 K0599 A REMOVE OR INSTALL OPERATOR CONSOLE DISCRETE PARTS

TASK #: 01990
TROUBLESHOOT AN/GSC-37 COMMUNICATION TERMINAL OPERATOR POSITION MONITOR SELECT OR UNIT
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
 CONSEQUENCES: MINOR, DAMAGE, NONE
 HOW OFTEN: AS REQUIRED
 OJT TRAINABLE: YES, NO, REQUIRES ELECTRONICS PRINCIPLES
 QTP ADEQUATE: NO
 TNG REFERENCE(S): T.O. 31W2-2GSC47-2
 TTT: 5
 SME OPINION: 5
EQUIPMENT:
 DIGITAL MULTIMETER, HANDTOOLS, SOLDERING EQUIPMENT,
 TRANSISTOR CHECKER
REFERENCES:
 T.O. 31W2-2GSC47-2
CONDITIONS CUES:
 COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW RELEASE OF ALL POSITIONS. FLYING MISSION DICTATES WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.
 CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED DURING PMI.
JOB STANDARDS:
IAW REFERENCES
OSR DATA:

	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	K 0599	3.28	26.0	24.0	21.0	8.0	4.87	7.0
304X4	K 0576	3.67	23.0	21.0	17.0	8.0	5.15	11.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY DISTRIBUTION PANEL
- K ISOLATE FAULTY MOTHERBOARD
- K ISOLATE FAULTY CIRCUIT BOARD
- A REMOVE AND REPLACE CIRCUIT BOARDS
- A REMOVE AND REPLACE COMPONENTS AND PARTS
- A REQUISITION PARTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 K0576 A BENCH CHECK OPERATOR CONSOLE COMPONENTS
- 4 K0599 A REMOVE OR INSTALL OPERATOR CONSOLE DISCRETE PARTS

TASK #: 02000
TROUBLESHOOT AN/GSC-37 COMMUNICATION TERMINAL OPERATOR POSITION TOUCH TONE UNIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
 CONSEQUENCES: MINOR, DAMAGE, NONE
 HOW OFTEN: AS REQUIRED
 OJT TRAINABLE: YES, NO, REQUIRES ELECTRONICS PRINCIPLES
 QTP ADEQUATE: NO
 TNG REFERENCE(S): T.O. 31W2-2GSC37-2
 TTT: 5
 SME OPINION: 5
EQUIPMENT:
 DIGITAL MULTIMETER, TRANSISTOR CHECKER, HANDTOOLS,
 SOLDERING EQUIPMENT
REFERENCES:
 T.O. 31W2-2GSC37-2
CONDITIONS CUES:
 COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW RELEASE OF ALL POSITIONS. FLYING MISSION DICTATES WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.
 CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED DURING PMI.
JOB STANDARDS:
IAW REFERENCES
OSR DATA:

	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	J 0543	6.75	78.0	75.0	69.0	36.0	5.05	18.0
304X4	K 0576	3.67	23.0	21.0	17.0	8.0	5.15	11.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY PRINTED CIRCUIT BOARD
- A REMOVE AND REPLACE CIRCUIT BOARD
- A REMOVE REPLACE CIRCUIT BOARD COMPONENTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0543 S SOLDER COMMUNICATIONS EQUIPMENT COMPONENTS
- 4 K0576 A BENCH CHECK OPERATOR CONSOLE COMPONENTS

TASK #: 02010
TROUBLESHOOT/REPAIR AN/GSC-37 COMMUNICATION TERMINAL OPERATOR POSITION REQUEST
/ACKNOWLEDGE UNIT SUBASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: AS REQUIRED
OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC PRINCIPLES AND
THEORY OF OPERATION
QTP ADEQUATE: NO
TNG REFERENCE(S): T.O 31W2-2GSC37-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
FLATBLADE SCREWDRIVER, BUTT SET(TELEPHONE HEADSET),
DIGITAL MULTIMETER, SOLDERING EQUIPMENT, TRANSISTOR TESTER,
SAFETY GOGGLES, SIGNAL GENERATOR (AUDIO) AND TEST CABLES
REFERENCES:
T.O 31W2-2GSC37-2
CONDITIONS CUES:
COND: INDOORS, IF MAINTENANCE ON ONE POSITION AFFECTS OTHER
POSITIONS, MAINTENANCE IS DEFERRED UNTIL MISSION WILL ALLOW
RELEASE OF ALL POSITIONS. WEATHER-NO MAINTENANCE PERFORMED
WITH LIGHTENING IN THE AREA. FLYING MISSION DICTATES
WHETHER OR NOT EQUIPMENT CAN BE RELEASED FOR MAINTENANCE.
CUE: EQUIPMENT MALFUNCTION (REPORTED BY JOB CONTROL) OR AS NOTED
DURING PMI.
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0596 2.75 10.0 11.0 11.0 7.0 4.65 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY PRINTED CIRCUIT BOARD
K ISOLATE FAULTY TRANSMISSION LINE(S)
A REMOVE AND REPLACE DEFECTIVE CIRCUIT CARD COMPONENTS
K INTERPRET TELEPHONE CIRCUIT DIAGRAMS
OSR JOB INVENTORY TASK STATEMENTS:
4 K0596 A REMOVE OR INSTALL INTERCOM EQUIPMENT DISCRETE PARTS

TASK #: 02020
INSPECT RP-343/GSH REPRODUCER
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 14, 84, 336
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-32A
TTT: 3
SME OPINION: 3
EQUIPMENT:
DEMAGNETIZER, TEXWIPES, COMMON SCREWDRIVER, VACUUM/DUST OFF, TEST
TAPE, LINT FREE CLOTH, DENATURED ALCOHOL, HEADSET
REFERENCES:
T.O. 31S3-4-122-1
LWC 1985 CS-RP343
CONDITIONS CUES:
COND: INSIDE, EQUIPMENT NOT IN USE
CUE: PMI LOG
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0366 3.17 7.0 9.0 9.0 4.0 5.72 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CLEAN EQUIPMENT
- K IDENTIFY COMPONENT LOCATION, NOMENCLATURE, FUNCTION
- A CLEAN TAKE-UP AND SUPPLY BRAKE DRUMS
- A CHECK PINCH WHEEL ARM AND TAPE LIFTER ROD FOR PROPER ENGAGEMENT
- A CHECK TO ENSURE BRAKES ARE CLEAR OF BRAKE DRUMS
- A PRESS PLAY TO ENSURE BRAKE SOLENOIDS ENGAGE RELEASING BRAKE WITHOUT BINDING
- K ENSURE RECORD LED BLINKS DURING RECORDING
- A PLAY TAPE ENSURING TIME ADVANCES AND AUDIO (TIME CODE) ON CH 18
- A HOLD TAKE-UP REEL TO ENSURE UPPER DECK FAILS(9-15 SEC)
- A CHECK SEARCH KNOB FUNCTION BOTH IN ADVANCE AND REWIND OBSERVING TIME CODE ADVANCEMENT OR DIGRESSION WITH TAPE MOVEMENT
- A SELECT TIME ON THUMB WHEEL SWITCHES AND ACTIVATE DIDI-TIME ON TAPE
- A CHECK TO ENSURE TRANSPORT MOVES WITHIN 10 SEC OF DESIRE TIME AND ENGAGES PLAY MODE
- A CHECK TO ENSURE SEVERAL CHANNEL LED ILLUMINATES

OSR JOB INVENTORY TASK STATEMENTS:
4 H0366 A ADJUST RADIO-TELETYPE SYSTEMS

TASK #: 02030
INSPECT OA-9034(V)/GYC-8(V) RADIO INTERFACE GROUP
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: 28, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. MB-23-106-WC AND T.O. MB-23-105-WC
TTT: 3
SME OPINION: 3
EQUIPMENT:
CLEANING SUPPLIES
REFERENCES:
T.O. MB-23-106-WC
T.O. MB-23-105-WC
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0531 6.15 67.0 66.0 61.0 28.0 4.37 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN INTERIOR AND EXTERIOR OF EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:
4 J0531 A PERFORM CORROSION PREVENTION ON GROUND RADIO COMMUNICATIONS EQUIPMENT (GRCE)

TASK #: 02040
PERFORMANCE CHECK OA-9034(V)/GYC-8(V) RADIO INTERFACE GROUP

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: SERIOUS, NONE, NONE

HOW OFTEN: 28

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. MB-23-105-WC, T.O. MB-23-105(2),
T.O. MB-23-106-WC AND T.O. MB-23-106

TTT: 3

SME OPINION: 3

EQUIPMENT:

DIGITAL MULTIMETER, AUDIO VOLTMETER, AUDIO OSCILLATOR

REFERENCES:

T.O. MB-23-105-WC

T.O. MB-23-105

T.O. MB-23-106-WC

T.O. MB-23-105(2)

T.O. MB-23-106

CONDITIONS CUES:

COND: ON EQUIPMENT

CUE: PMI

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0518 5.30 43.0 42.0 41.0 20.0 5.34 12.0

ACTIVITIES SKILL KNOWLEDGE:

A CHECK POWER SUPPLY VOLTAGES ON WIRE LINE MODEM,
PROGRAMMABLE COMMUNICATIONS PROCESSOR, AND RADIO

INTERFACE

A CHECK ALIGNMENT VOLTAGES ON DIGITAL DATA MODEM CHANNELS

NELS

A CHECK TRANSMISSION AUDIO LEVELS ON RADIO INTERFACE
CHANNELS

A CHECK VOLTAGES AND AUDIO LEVELS ON RADIO INTERFACE
GROUP LEVELS

OSR JOB INVENTORY TASK STATEMENTS:

4 J0518 A BENCH CHECK POWER SUPPLY EQUIPMENT

TASK #: 02050

ADJUST OA-9034(V)/GYC-8(V) RADIO INTERFACE GROUP QUANTIZED FREQUENCY MODULATION
(QFM) MODEM

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: MINOR, NONE, NONE

HOW OFTEN: SIX MONTHS

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. MB-23-105(1)

TTT: 5

SME OPINION: 3

EQUIPMENT:

VOLTMETER, HAND TOOLS

REFERENCES:

T.O. MB-23-105(1)

CONDITIONS CUES:

COND: ON EQUIPMENT, EQUIPMENT RELEASED

CUE: FAILURE OF PMI CHECK, RESULTS OF TROUBLESHOOTING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0490 4.88 15.0 21.0 21.0 13.0 6.07 11.0

ACTIVITIES SKILL KNOWLEDGE:

A CHECK INDICATOR LIGHTS

A PERFORM SELF TEST

A ADJUST AUDIO OUT SIGNAL LEVEL

OSR JOB INVENTORY TASK STATEMENTS:

4 J0490 A ALIGN FREQUENCY MODULATION (FM) EQUIPMENT

TASK #: 02060
ADJUST OA-9034(V)/GYC-8(V) RADIO INTERFACE UNIT
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. MB-23-106(1)
TTT: 5
SME OPINION: 3
EQUIPMENT:
AUDIO OSCILLATOR, AUDIO METER, MATCHING TRANSFORMER, HAND TOOLS
DIGITAL MULTIMETER
REFERENCES:
T.O. MB-23-106(1)
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: FAILURE OF PMI CHECK, RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0490 4.88 15.0 21.0 21.0 13.0 6.07 11.0
ACTIVITIES SKILL KNOWLEDGE:
A INJECT AUDIO SIGNAL TO RADIO INTERFACE UNIT
A CHECK DB LEVEL AND VOLTAGE ON RADIO INTERFACE UNIT
CIRCUIT CARD
A ADJUST AUDIO OUT SIGNAL AND VOLTAGE LEVELS
A CHECK AUDIO SIGNAL FROM QUANTIZED FREQUENCY MODULATION (QFM) MODEM
A ADJUST QFM AUDIO SIGNAL ON RADIO INTERFACE UNIT
CIRCUIT CARD
OSR JOB INVENTORY TASK STATEMENTS:
4 J0490 A ALIGN FREQUENCY MODULATION (FM) EQUIPMENT

TASK #: 02070
TROUBLESHOOT OA-9034(V)/GYC-8(V) RADIO INTERFACE GROUP TO SUBASSEMBLY LEVEL
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 2 MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, SYSTEM KNOWLEDGE
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. MB-23-106(1), T.O. MB-23-105(1),
T.O. MB-23-105(2)
TTT: 5
SME OPINION: 5
EQUIPMENT:
AUDIO OSCILLATOR, AC VOLTMETER, MATCHING TRANSFORMER, DIGITAL
MULTIMETER, OSCILLOSCOPE
REFERENCES:
T.O. MB-23-106(1)
T.O. MB-23-105(1)
T.O. MB-23-105(2)
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: USER COMPLAINT, FAILURE OF PMI PERFORMANCE CHECK, INABILITY
TO OVERRIDE SYSTEM
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0424 2.78 2.0 4.0 4.0 2.0 6.03 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM SELF TESTS ON PROCESSOR, QFM MODEM, RADIO
INTERFACE UNIT, AND WIRE LINE MODEM
A PERFORM LOOPBACK TESTS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0424 K ISOLATE MALFUNCTIONS WITHIN DATA LINK SYSTEMS TO LRU

TASK #: 02080
TROUBLESHOOT OA-9034(V)/GYC-8(V) RADIO INTERFACE GROUP FROM SUBASSEMBLY LEVEL
TO CIRCUIT CARD LEVEL
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: 2 MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, SYSTEM KNOWLEDGE
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. MB-23-106(1), T.O. MB-23-105(1),
T.O. MB-23-105(2)
TTT: 5
SME OPINION: 5
EQUIPMENT:
AUDIO OSCILLATOR, AC VOLTMETER, MATCHING TRANSFORMER, DIGITAL
MULTIMETER, OSCILLOSCOPE, ELECTROSTATIC DISCHARGE EQUIPMENT
REFERENCES:
T.O. MB-23-106(1)
T.O. MB-23-105(1)
T.O. MB-23-105(2)
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: RESULTS OF TROUBLESHOOTING TO SUBASSEMBLY LEVEL
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0603 2.82 22.0 22.0 19.0 8.0 5.04 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM PMI PERFORMANCE CHECKS
A REFERENCE T.O. TROUBLESHOOTING SIGNAL FLOW CHART TO
ISOLATE FAULTY CIRCUIT CARD
A REMOVE AND REPLACE CIRCUIT CARD
OSR JOB INVENTORY TASK STATEMENTS:
4 K0603 A REMOVE OR INSTALL REMOTE CONTROL UNIT DISCRETE PARTS

TASK #: 02090
INSPECT MDL-850 R/T HARRIS LASERFAX
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 7, 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): 850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS
LASERFAX RECORDER AND 850-TMM-G01 MAINTENANCE
MANUAL FOR HARRIS LASERFAX TRANSMITTER
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, BLOWER, CLEANING SUPPLIES, DIGITAL MULTIMETER,
ANALOG MULTIMETER
REFERENCES:
850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS LASERFAX RECORDER
850-TMM-G01 MAINTENANCE MANUAL FOR HARRIS LASERFAX TRANSMITTER
CONDITIONS CUES:
COND: EQUIPMENT RELEASED
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0455 3.22 8.0 8.0 7.0 5.0 3.80 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT RECORDER VISUALLY FOR OVERHEATING, LEAKAGE,
CLEANLINESS CORROSION, COPY QUALITY AND PROPER CIRCUIT CARD INSERTION
A LOAD FILM AND RAPID ADVANCE TO CHECK FOR BINDING OR SLIPPING
A CHECK OUTPUT TEST COPY FOR CORRECT NUMBER OF STEPS AND DENSITY
A ADJUST CONTRAST CONTROL AS REQUIRED
A CLEAN OUTSIDE RECORDER SURFACE
A CLEAN AIR FILTERS
A REMOVE AND CLEAN THE PLATEN ASSEMBLY, DEVELOPER ROLLER,
AND, CAPSTAN DRIVE
A CHECK TRANSMITTER OUTPUT FOR CORRECT RESOLUTION AND DENSITY
OSR JOB INVENTORY TASK STATEMENTS:
4 I0455 A OPERATIONALLY CHECK FACSIMILE SYSTEMS

TASK #: 02100
TROUBLESHOOT MDL-850 R/T HARRIS LASERFAX
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCES: 850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS
LASERFAX RECORDER AND 850-TMM-G01 MAINTENANCE
MANUAL FOR HARRIS LASERFAX TRANSMITTER
TTT: 3
SME OPINION: 5
EQUIPMENT:
DIGITAL VOLTMETER, OSCILLOSCOPE, FREQUENCY COUNTER,
THERMO-COUPLE SENSOR, EXTENDER BOARD, LASER EYE PROTECTION
GOGGLES, VARIABLE ATTENUATOR, FUNCTION GENERATOR, HANDTOOLS
REFERENCES:
850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS LASERFAX RECORDER
850-TMM-G01 MAINTENANCE MANUAL FOR HARRIS LASERFAX TRANSMITTER
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: OPERATOR COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0425 3.72 4.0 5.0 5.0 4.0 5.98 11.0
304X4 I 0476 2.10 5.0 4.0 4.0 3.0 4.05 2.0
ACTIVITIES SKILL KNOWLEDGE:
A RUN SELF TEST
A CHECK FOR BINDING PARTS, FILM JAM
A CHECK FOR BAD PHONE LINES
A CHECK FILM PROCESSOR OPERATION
A CHECK CIRCUIT CARD OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
4 I0425 K ISOLATE MALFUNCTIONS WITHIN FACSIMILE SYSTEMS TO LRU
4 I0476 A REMOVE OR INSTALL FACSIMILE EQUIPMENT LRU

TASK #: 02110
REMOVE/REPLACE MDL-850 R/T HARRIS LASERFAX OPTICS BENCH
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 6 MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): 850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS
LASERFAX RECORDER
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS
REFERENCES:
850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS LASERFAX RECORDER
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: BLANK MAPS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0476 2.10 5.0 4.0 4.0 3.0 4.05 2.0
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE PROCESSOR TRAY
A REMOVE AND REPLACE OPTICS BENCH
A REPLACE PROCESSOR TRAY
OSR JOB INVENTORY TASK STATEMENTS:
4 I0476 A REMOVE OR INSTALL FACSIMILE EQUIPMENT LRU

TASK #: 02120
REMOVE AND REPLACE MDL-850 R/T LASERFAX PROCESSOR TRAY MECHANICAL COMPONENTS
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 6 MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): 850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS
LASERFAX RECORDER AND 850-TMM-G01 MAINTENANCE
MANUAL FOR HARRIS LASERFAX TRANSMITTER
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, HEX KEY TORQUE WRENCH
REFERENCES:
850-TMM-G01 MAINTENANCE MANUAL FOR HARRIS LASERFAX TRANSMITTER
850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS LASERFAX RECORDER
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, IN SHOP
CUE: OPERATOR COMPLAINT, RESULTS OF TROUBLESHOOT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 M 0634 1.72 2.0 3.0 3.0 2.0 5.05 2.0
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE PROCESSOR TRAY
A REMOVE AND REPLACE BELTS, ROLLERS, FOAM PINCH ROLLERS, BEARINGS, GEARS, AND SCREWS
A REMOVE OR REPLACE DC MOTORS
OSR JOB INVENTORY TASK STATEMENTS:
4 M0634 A REMOVE OR INSTALL FACSIMILE SYSTEM DISCRETE PARTS

TASK #: 02130
ALIGN MDL-850 R/T HARRIS LASERFAX
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 360
OJT TRAINABLE: YES, NO
QTP ADEQUATE: NONE
TNG REFERENCE(S): 850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS
LASERFAX RECORDER AND 850-TMM-G01 MAINTENANCE
MANUAL FOR HARRIS LASERFAX TRANSMITTER
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL VOLTMETER, OSCILLOSCOPE, FREQUENCY COUNTER, SWEEP TOOL
Fixture THERMO-COUPLE SENSOR, EXTENDER BOARD, LASER EYE
PROTECTION GOGGLES, VARIABLE ATTENUATOR, FUNCTION GENERATOR,
HANDTOOLS
REFERENCES:
850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS LASERFAX RECORDER
850-TMM-G01 MAINTENANCE MANUAL FOR HARRIS LASERFAX TRANSMITTER
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: PMI OR TROUBLESHOOTING RESULTS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0572 3.62 4.0 5.0 5.0 4.0 6.02 7.0
304X4 I 0455 3.22 8.0 8.0 7.0 5.0 3.80 7.0

ACTIVITIES SKILL KNOWLEDGE:
A CHECK AND ADJUST LOW VOLTAGE POWER SUPPLY AS REQUIRED
A CHECK AND ADJUST TEMPERATURE AND TIMING OF TEMPERATURE CONTROLLER AS REQUIRED
A CHECK AND ADJUST TEMPERATURE WARNING INDICATOR AS REQUIRED
A CHECK AND ADJUST OSCILLATOR AS REQUIRED
A CHECK AND ADJUST LASER SWEEP AS REQUIRED
A CHECK AND ADJUST STEP WEDGE OUTPUT AS REQUIRED
A CHECK AND ADJUST BLACK HIGH OFFSET AS REQUIRED
A CHECK AND ADJUST START TONE DECODER FREQUENCY AS REQUIRED
A CHECK AND ADJUST STOP TONE DECODER FREQUENCY AS REQUIRED
A CHECK AND ADJUST TONE CARRIER DETECTOR FREQUENCY AS REQUIRED
A CHECK AND ADJUST AGC MULTIPLIER FEED THROUGH, DEMODULATOR AND COMPENSATED VIDEO OFFSET AS REQUIRED
A CHECK AND ADJUST MTF
A CHECK AND ADJUST FM DEMODULATOR AS REQUIRED
A CHECK AND ADJUST NON-LINEAR AMPLIFIER FOR PAPER OR FILM AS REQUIRED
A CHECK AND ADJUST CONTRAST AND MODULATOR POWER AS REQUIRED

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0455 A OPERATIONALLY CHECK FACSIMILE SYSTEMS
- 4 K0572 A BENCH CHECK FACSIMILE SYSTEMS

TASK #: 02140
ALIGN MDL-850 R/T HARRIS LASERFAX MECHANICAL COMPONENTS
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 3 MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): 850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS LASERFAX RECORDER
TTT: 3
SME OPINION: 5
EQUIPMENT:
HEX KEY TORQUE WRENCH, HANDTOOLS, OSCILLOSCOPE, FREQUENCY COUNTER
REFERENCES:
850-RMM-G13 MAINTENANCE MANUAL FOR HARRIS LASERFAX RECORDER
CONDITIONS CUES:
COND: EQUIPMENT RELEASED, ON EQUIPMENT
CUE: PAPER OR FILM NOT FEEDING OR CUTTING CORRECTLY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0572 3.62 4.0 5.0 5.0 4.0 6.02 7.0
304X4 I 0455 3.22 8.0 8.0 7.0 5.0 3.80 7.0

ACTIVITIES SKILL KNOWLEDGE:
A ADJUST PUSH ROD LENGTH
A ADJUST CUT LEVER ANGLE
A ADJUST CUTTER STOP POSITION
A ADJUST VERTICAL BLADE SEPARATION
A ADJUST PROCESSOR ROLLER RETAINER RING FOR CORRECT TENSION

OSR JOB INVENTORY TASK STATEMENTS:

- 4 K0572 A BENCH CHECK FACSIMILE SYSTEMS
- 4 I0455 A OPERATIONALLY CHECK FACSIMILE SYSTEMS

TASK #: 02150
INSPECT MD-1061 DIGITAL DATA MODEM
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, NO BASIC ELECTRONICS REQUIRED
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2USC-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
CLEANING MATERIALS, AN/UGC-129 (TELETYPE), HANDTOOLS
REFERENCES:
T.O. 31W2-2USC-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE-DEPLOYMENT INSPECTION, POST-DEPLOYMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK POWER SUPPLY VOLTAGES
A PERFORM LOOP BACK TEST
A CHECK OUTPUT LEVELS
A CLEAN EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 M0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

TASK #: 02160
TROUBLESHOOT MD-1061 DIGITAL DATA MODEM
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: YEARLY
OJT TRAINABLE: YES, NO BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2USC-1
TTT: 3
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, OSCILLOSCOPE, DIGITAL MULTIMETER, TRUE RMS
VOLTMETER, SOLDERING KIT, COMMON HANDTOOLS
REFERENCES:
T.O. 31W2-2USC-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: NO DATA OUTPUT, INDICATOR LIGHT, GARBED DATA OUTPUT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0545 2.82 9.0 11.0 10.0 7.0 6.33 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A ADJUST TRANSMITTER OUTPUT LEVEL
A ADJUST MASTER OSCILLATOR CENTER FREQUENCY LEVEL
A ADJUST FREQUENCY CORRECTOR PRINTED WIRING BOARD
A ADJUST RECEIVER INPUT LEVEL
A ADJUST CODEWORD SYNC TONE DEMODULATOR
K ISOLATE MALFUNCTIONS TO POWER SUPPLIES
K ISOLATE MALFUNCTIONS TO CONTROL AND INDICATOR CIR-
CUITS
K ISOLATE MALFUNCTIONS TO PRINTED WIRING BOARDS (CIR-
CUIT CARDS)
A REMOVE AND REPLACE DEFECTIVE SUBASSEMBLIES
A REMOVE AND REPLACE CIRCUIT CARDS
A PERFORM LOOP BACK TESTS
OSR JOB INVENTORY TASK STATEMENTS:
4 K0545 A ALIGN ANTENNA TUNING UNIT DISCRETE PARTS

TASK #: 02170
INSPECT AN/MRC-107 MOBILE HF/VHF/UHF COMMUNICATIONS SYSTEM
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 56
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2MRC107-4 AND T.O. 31R2-2MRC107-6WC
TTT: 5
SME OPINION: 5
EQUIPMENT:
POWER SUPPLY, SIGNAL GENERATOR (RF AND AUDIO), DISTORTION
ANALYZER, UHF TEST SET, VHF TEST SET, ALIGNMENT TOOLS, WATTMETER,
ANTENNA DUMMY LOAD, AUDIO POWER METER, DIGITAL MULTIMETER, VTVM,
TUBE TESTER, OSCILLOSCOPE, CLEANING SUPPLIES, FREQUENCY COUNTER,
REFLECTOMETER, HANDTOOLS, ANALOG MULTIMETER
REFERENCES:
T.O.31R2-2MRC107-4
T.O.31R2-2MRC107-6WC
CONDITIONS CUES:
COND: INDOORS
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0493 4.95 37.0 35.0 29.0 11.0 6.38 12.0
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
304X4 J 0500 6.72 50.0 47.0 40.0 22.0 6.10 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN EQUIPMENT
A CHECK RADIO GROUPS TRANSMIT OPERATION
A CHECK RADIO GROUPS RECEIVE OPERATION
A CHECK RADIO GROUPS AUDIO OPERATION
A PERFORM OPERATION CHECK OF AN/MRC-107 TRANSCEIVER
OSR JOB INVENTORY TASK STATEMENTS:
4 J0493 A ALIGN MULTIPLE CHANNEL TRANSMISSION EQUIPMENT
4 J0499 A ALIGN UHF EQUIPMENT
4 J0499 A ALIGN UHF EQUIPMENT
4 J0500 A ALIGN VFRY HIGH FREQUENCY (VHF) EQUIPMENT

TASK #: 02180
TROUBLESHOOT AN/MRC-107 MOBILE HF/VHF/UHF COMMUNICATIONS SYSTEM
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ? (AS REQUIRED)
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2MRC107-4
TTT: 5
SME OPINION: 5
EQUIPMENT:
POWER SUPPLY, SIGNAL GENERATOR (RF AND AUDIO), DISTORTION
ANALYZER, UHF TEST SET, VHF TEST SET, ALIGNMENT TOOLS, WATTMETER,
ANTENNA DUMMY LOAD, AUDIO POWER METER, DIGITAL MULTIMETER, VTVM,
TUBE TESTER, OSCILLOSCOPE, HANDTOOLS, ANALOG MULTIMETER,
FREQUENCY COUNTER, SPECTRUM ANALYZER, SOLDERING KIT
REFERENCES:
T.O. 31R2-2MRC107-4
CONDITIONS CUES:
COND: INDOORS OR IN FIELD
CUE: USER COMPLAINT OR RESULT OF PMI
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0375 5.22 50.0 48.0 41.0 19.0 6.61 12.0
 304X4 H 0363 5.95 60.0 63.0 60.0 35.0 4.19 18.0
 304X4 I 0462 3.40 18.0 18.0 18.0 10.0 3.31 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A PERFORM OPERATION CHECK OF AN/MRC-107 TRANSCEIVER
- A ISOLATE FAULTY LRU
- A REMOVE AND REPLACE WITH KNOWN GOOD LRU WHEN IN FIELD
- A ISOLATE FAULTY COMPONENT
- A REMOVE AND REPLACE FAULTY COMPONENT WHEN IN GARRISON
- A PERFORM OPERATION CHECK OF AN/MRC-107 TRANSCEIVER

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
- 4 I0462 A OPERATIONALLY CHECK PHONE PATCH SYSTEMS
- 4 H0375 K ISOLATE MALFUNCTIONS WITHIN MULTIPLE CHANNEL EQUIPMENT

TASK #: 02190

INSPECT AN/MRC-117 RADIO SET

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 3

THOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: 7, 28

OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2-141

TTT: 5

SME OPINION: 5

EQUIPMENT:

RF VOLTMETER OR WATTMETER, DUMMY LOAD, DIGITAL MULTIMETER,
 HANDTOOLS , ANALOG MULTIMETER

REFERENCES:

T.O. EISD CEMI 600-19

CONDITIONS CUES:

COND: HEAVY WINDS MAY LIMIT PMI

CUE: PMI

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0391 5.47 42.0 43.0 40.0 21.0 4.29 12.0
 304X4 M 0630 2.30 23.0 25.0 23.0 14.0 3.98 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK METER READINGS
- A CHECK RADIO OPERATION
- A CHECK VOLTAGE REGULATOR AND BATTERY VOLTAGES
- A CHECK BANDPASS FILTER VOLTAGES
- A CHECK BANDPASS FILTER OPERATION
- A CHECK TRANSCEIVER POWER OUTPUT
- A CHECK ANTENNA COUPLER INTERLOCK OPERATION
- A CHECK ANTENNA SWITCH ASSEMBLY OPERATION
- A CHECK ANTENNA BASE INPUT TO OUTPUT CONTINUITY
- A CHECK POWER CONVERTER VOLTAGES
- A CHECK BATTERY WATER LEVEL
- A PERFORM GENERAL CLEANING
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 M0630 A OPERATIONALLY CHECK MOBILE ANTENNA SYSTEMS
- 4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

TASK #: 02200
TROUBLESHOOT AN/MRC-117 RADIO SET TO MAJOR COMPONENT LEVEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS
BASIC RADIO COMPONENT FUNCTIONS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2-141
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, DUMMY LOAD, SOLDERING KIT, ANALOG MULTIMETER
REFERENCES:
T.O. 31R2-2-141
CONDITIONS CUES:
COND: MAY BE TIME CRITICAL, IN FIELD
CUE: NO RF OUTPUT, LOW RF OUTPUT, LOW SENSITIVITY, NO POWER
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0377 6.07 43.0 44.0 41.0 20.0 6.55 12.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK RF OUTPUT OF RADIOS
A CHECK RADIO INPUT VOLTAGE
A CHECK ELECTRICAL CABINET VOLTAGES
A CHECK ELECTRICAL CABINET CONTINUITY
A REMOVE AND REPLACE MAJOR SUBASSEMBLIES, MINOR PARTS,
AND COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 H0377 K ISOLATE MALFUNCTIONS WITHIN SIDE BAND EQUIPMENT

TASK #: 02210
TROUBLESHOOT AN/MRC-117 RADIO SET TO MODULE AND INDIVIDUAL COMPONENT LEVEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS
BASIC RADIO COMPONENT FUNCTIONS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-42-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
SIGNAL GENERATOR, FREQUENCY COUNTER, VTVM, DIGITAL MULTIMETER,
DUMMY LOAD, DISTORTION ANALYZER, THROUGH-LINE WATTMETER, T-
CONNECTOR, AUDIO METER, CAPACITOR DIVIDER, OSCILLOSCOPE,
678P1 TEST SET, AUDIO OSCILLATOR, ATTENUATOR, VARIABLE DC POWER
SUPPLY, RF MILLIVOLTMETER, ANALOG MULTIMETER, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-42-2
CONDITIONS CUES:
COND: MAY BE TIME CRITICAL, IN SHOP
CUE: NO RF OUTPUT, NO AUDIO OUTPUT, NO VOLTAGE LOW OR HIGH,
FREQUENCY DRIFT
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
 304X4 N 0648 1.52 .0 1.0 1.0 1.0 6.71 2.0

ACTIVITIES SKILL KNOWLEDGE:
 A CHECK FRONT PANEL METER VOLTAGES
 A CHECK LOW VOLTAGE POWER SUPPLY VOLTAGES
 A CHECK AUDIO AMPLIFIER VOLTAGES
 A CHECK IF TRANSLATOR VOLTAGES
 A CHECK IF TRANSLATOR AUDIO SIGNAL AND IF FREQUENCY
 A CHECK RF TRANSLATOR VOLTAGES
 A CHECK RF TRANSLATOR METER READINGS
 A CHECK RF TRANSLATOR FREQUENCY
 A CHECK POWER AMPLIFIER VOLTAGES
 A CHECK POWER AMPLIFIER METER READINGS
 A CHECK RECEIVER SENSITIVITY
 A CHECK IF AMPLIFIER VOLTAGES
 A REMOVE AND REPLACE INDICATED MODULE
 K ISOLATE CIRCUIT THROUGH AUDIO/IF/RF SIGNAL INJECTION
 AND CIRCUIT TRACING
 A REMOVE AND REPLACE INDICATED COMPONENT

OSR JOB INVENTORY TASK STATEMENTS:
 4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
 EQUIPMENT
 4 N0648 K ISOLATE MALFUNCTIONS WITHIN RADIO TYPE MAINTENANCE
 NETWORK (RTMN) OR COMPONENTS

TASK #: 02220
 ALIGN OR ADJUST AN/MRC-117 RADIO SET
 DUTY CODE: X4
 TASK STATUS: 3-KP
 TIMES ANALYZED: 2

TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: SEMI-ANNUALLY
 OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS
 BASIC RADIO COMPONENT FUNCTIONS

QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 12R2-4-42-2
 TTT: 5
 SME OPINION: 5

EQUIPMENT:
 SIGNAL GENERATOR, FREQUENCY COUNTER, VTVM, DIGITAL MULTIMETER,
 DUMMY LOAD, DISTORTION ANALYZER, THROUGH-LINE WATTMETER, T-
 CONNECTOR, AUDIO METER, CAPACITOR DIVIDER, OSCILLOSCOPE,
 678P1 TEST SET, AUDIO OSCILLATOR, ATTENUATOR, VARIABLE DC
 POWER SUPPLY, RF MILLI-VOLTMETER, ANALOG MULTIMETER

REFERENCES:
 T.O. 12R2-4-42-2

CONDITIONS CUES:
 COND: MAY BE TIME CRITICAL, IN SHOP, ENTIRE UNIT IS REPLACED IN
 FIELD
 CUE: RESULTS OF TROUBLESHOOTING

JOB STANDARDS:
 IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 J 0494 2.25 1.0 2.0 2.0 2.0 5.71 7.0
 304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0

ACTIVITIES SKILL KNOWLEDGE:
 A ADJUST OSCILLATORS
 A ADJUST VARIABLE CAPACITORS
 A ADJUST VARIABLE INDUCTORS (COIL)
 A ADJUST VARIABLE RESISTORS
 A ALIGN ELECTROMECHANICAL ASSEMBLIES

OSR JOB INVENTORY TASK STATEMENTS:
 4 J0494 A ALIGN RADIO-TELEGRAPH EQUIPMENT
 4 J0497 A ALIGN SIDE BAND EQUIPMENT

TASK #: 02230
PERFORMANCE TEST AN/MRC-117 RADIO SET 618T TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI ANNUALLY
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS
BASIC RADIO COMPONENT FUNCTIONS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
SIGNAL GENERATOR, FREQUENCY COUNTER, VTVM, DIGITAL MULTIMETER,
DUMMY LOAD, DISTORTION ANALYZER, THROUGH-LINE WATTMETER, T-
CONNECTOR, AUDIO METER, CAPACITOR DIVIDER, O-SCOPE, 678P1 TEST
SET, AUDIO OSCILLATOR, ATTENUATOR, VARIABLE DC POWER SUPPLY,
ANALOG MULTIMETER
REFERENCES:
T.O. 12R2-4-42-2
CONDITIONS CUES:
COND: MAY BE TIME CRITICAL, IN SHOP ONLY
CUE: FOLLOWS ANY REPAIR ACTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0391 5.47 42.0 43.0 40.0 21.0 4.29 12.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK POWER SUPPLY AND POWER AMPLIFIER PLATE CURRENT
A CHECK LOW VOLTAGE POWER SUPPLY OUTPUT
A CHECK MHZ FREQUENCY STABILIZER
A CHECK VARIABLE FREQUENCY OSCILLATOR TRACKING
A CHECK VFO CAPTURE RANGE
A CHECK DIGIT OSCILLATOR
A CHECK RECEIVER AM GAIN AND SENSITIVITY
A CHECK RECEIVER SSB GAIN AND SENSITIVITY,
A CHECK RECEIVER AGC CHARACTERISTICS, SELECTIVITY, AND
AUDIO DISTORTION
A CHECK TRANSMITTER AM POWER OUTPUT AND RESIDUAL OUTPUT
VOLTAGE
A CHECK TRANSMITTER SSB POWER OUTPUT, FREQUENCY ACCURA-
CY, AND MODULATION CHARACTERISTICS
A CHECK SYSTEM INTERFACE +260 VOLT OUTPUT, 115V/400HZ
OUTPUT, 27.5 VOLT OUTPUT, RECYCLE LINE OUTPUT AND
TUNE POWER
A CHECK RECEIVER AUDIO OUTPUT
A CHECK SIDETONE OUTPUT LEVEL
OSR JOB INVENTORY TASK STATEMENTS:
4 H0391 A OPERATIONALLY CHECK MRC BAND EQUIPMENT

TASK #: 02240
PERFORMANCE TEST AN/MRC-117 RADIO SET 490T-1 ANTENNA COUPLER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS
BASIC RADIO COMPONENT FUNCTIONS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-92-3
TTT: 5
SME OPINION: 5
EQUIPMENT:
DUMMY LOAD, RF VOLTMETER, DIGITAL MULTIMETER, ANALOG MULTIMETER
REFERENCES:
T.O. 12R2-4-92-3
CONDITIONS CUES:
COND: MAY BE TIME CRITICAL, IN SHOP ONLY
CUE: FOLLOWS ANY REPAIR ACTION
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0565 4.00 29.0 29.0 27.0 14.0 5.65 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM GO/NO GO FUNCTIONAL TESTS
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CHECK VARICOIL OPERATION
- A BENCH TEST ANTENNA COUPLER
- A CHECK VSWR

OSR JOB INVENTORY TASK STATEMENTS:

4 K0565 A BENCH CHECK ANTENNA COUPLERS

TASK #: 02250

PREPARE AN/MRC-117 RADIO SET FOR MOBILE OPERATION

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: ANNUALLY

OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS
BASIC RADIO COMPONENT FUNCTIONS

QYP ADEQUATE: NONE

TNG REFERENCE(S): LOCAL CHECKLIST

TTT: 5

SME OPINION: 5

EQUIPMENT:

DUMMY LOAD, DIGITAL MULTIMETER, HAND TOOLS, ANALOG MULTIMETER

REFERENCES:

LOCAL CHECKLIST

CONDITIONS CUES:

COND: MAY BE TIME CRITICAL, IN FIELD

CUE: CONTINGENCY ACTION

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI

304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0

304X4 H 0391 5.47 42.0 43.0 40.0 21.0 4.29 12.0

304X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A SITE AN/MRC-117 RADIO SET
- A CONNECT PU666/G POWER UNIT
- A DETERMINE ANTENNA TYPE REQUIRED
- A CONSTRUCT REQUIRED ANTENNA

OSR JOB INVENTORY STATEMENTS:

4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

4 M0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

TASK #: 02260
INSPECT OJ-314 SYSTEM
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28, 84, 168, 336
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2FSC-157, T.O. 31W2-2FSC-167,
AND T.O. AFCC-CEMI321-32

TTT: 5
SME OPINION: 5
PERFORMANCE OF OPERATION CHECKS MAY REQUIRE EQUIPMENT SYSTEM ALIGNMENTS. SEVERAL DIFFERENT MODELS OF OJ-314 EXIST. PRIMARY DIFFERENCES ARE SIZE TO CONTROL TOWER SIZE AND SYSTEM UPGRADES FOR NEWER EQUIPMENT.

EQUIPMENT:

TOOL KIT, CABLES AND ADAPTER, AUDIO OSCILLATOR, ANALOG MULTIMETER, DISTORTION ANALYZER, DIGITAL VOLTMETER, OSCILLOSCOPE, BRIDGING TRANSFORMER, AC-VTVM (VACUUM TUBE VOLTMETER), TELEPHONE TEST SET, AUDIO TEST SET, ELECTRONIC CIRCUIT TEST SET (TS-3822 AND TS-3679) CAPACITANCE DECADE, HANDSET, ELECTRONIC COUNTER, VACUUM CLEANER, CLEANING SUPPLIES, FREQUENCY COUNTER

REFERENCES:

T.O. 31W2-2FSC-157
T.O. 31W2-2FSC-167
T.O. AFCC-CEMI321-32

CONDITIONS CUES:

COND: INDOORS, POWER ON/OFF, 2-MAN
CUE: PMI, USER COMPLAINT

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	IJOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H	0389	3.53	13.0	13.0	13.0	7.0	4.18
304X4	I	0449	2.27	7.0	6.0	5.0	3.0	3.54
304X4	I	0452	4.42	41.0	37.0	31.0	15.0	3.44
								12.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CLEAN INTERIOR AND EXTERIOR OF CABINETS AND COMMUNICATIONS CONSOLE POSITIONS
- A PERFORM RADIO INDICATOR LAMP TEST
- A PERFORM ILLUMINATION CONTROL PERFORMANCE TEST
- A PERFORM ALARM CIRCUIT TEST
- A PERFORM FUSE INDICATOR LAMP TEST
- A PERFORM INTERCOM CIRCUIT TEST
- A PERFORM MONITOR CIRCUIT TEST
- A PERFORM PBX LINE CHECK
- A PERFORM AUTOMATIC SIGNALING UNIT TEST
- A PERFORM VOICE PAGE LINE TEST
- A PERFORM SELECT SIGNALING LINE TEST
- A PERFORM REQUEST/ACKNOWLEDGE CIRCUIT TEST
- A PERFORM REQUEST/ACKNOWLEDGE INTERCOM AUDIO TEST
- A PERFORM BACKUP BATTERY OPERATIONAL TEST
- A PERFORM POWER SUPPLY PERFORMANCE TEST
- A PERFORM TRANSMIT SYSTEM PERFORMANCE TEST
- A PERFORM RECEIVE SYSTEM PERFORMANCE TEST
- A PERFORM RECEIVER AMPLIFIER UNIT 121E PERFORMANCE TEST
- A PERFORM HEADPHONE AMPLIFIER PERFORMANCE TEST
- A PERFORM SPEAKER AMPLIFIER PERFORMANCE TEST
- A PERFORM MONITOR AMPLIFIER PERFORMANCE TEST
- A PERFORM MICROPHONE AMPLIFIER PERFORMANCE TEST
- A PERFORM LINE AMPLIFIER/TERMINATOR UNIT TRANSMIT TEST
- A PERFORM LINE AMPLIFIER/TERMINATOR UNIT RECEIVE TEST
- A SERVICE POWER DISTRIBUTION PANEL NICAD BATTERIES
- S FABRICATE CABLES AND CONNECTORS
- S FABRICATE TEST BOXES

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0449 A OPERATIONALLY CHECK AUTOMATIC SWITCHBOARDS
- 4 I0452 A OPERATIONALLY CHECK COMMUNICATIONS PATCH PANELS
- 4 H0389 A OPERATIONALLY CHECK RADIO-TELPHONE SYSTEMS

TASK #: 02270
TROUBLESHOOT OJ-314 CONSOLE POSITIONS
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2FSC-157 AND T.O. 31W2-2FSC-167
TTT: 5
SME OPINION: 5
EQUIPMENT:
TOOL KIT, CABLES AND ADAPTER, AUDIO OSCILLATOR, ANALOG
MULTIMETER, DISTORTION ANALYZER, DIGITAL VOLTMETER, OSCILLOSCOPE,
BRIDGING TRANSFORMER, AC-VTVM (VACUUM TUBE VOLTMETER), TELEPHONE
TEST SET, AUDIO TEST SET, ELECTRONIC CIRCUIT TEST SET (TS-3822
AND TS-3679) CAPACITANCE DECADE, HANDSET, ELECTRONIC COUNTER,
SOLDERING KIT, CAPACITOR TESTER, SIGNAL GENERATOR, FREQUENCY
COUNTER, CAPACITOR SUBSTITUTION BOX, DC RESTORER,
REFERENCES:
T.O. 31W2-2FSC-157
T.O. 31W2-2FSC-167
CONDITIONS CUES:
COND: IN-TOWER, POWER ON/OFF, SYSTEM PARTIALLY DISABLED, 2-MAN
CUE: PMI FINDING, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 G 0282 2.33 10.0 10.0 9.0 6.0 5.75 7.0
304X4 G 0290 2.38 12.0 12.0 10.0 7.0 4.67 7.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK INDICATOR LAMPS, FUSES, AND ALARM PANEL FOR
TROUBLE INDICATIONS
A PERFORM OPERATION CHECK OF MALFUNCTIONING EQUIPMENT
AND SUBASSEMBLIES
A CHECK EXTENT OF PROBLEM ACROSS MULTIPLE POSITIONS
K ISOLATE FAULTY SUBASSEMBLY, MODULE, CIRCUIT CARD, OR
MINOR PART
A REMOVE/REPLACE FAULTY MODULE, CIRCUIT CARD, OR PART
K ISOLATE FAULTY COMPONENT ON CIRCUIT CARD
A REMOVE AND REPLACE FAULTY CIRCUIT CARD COMPONENT
A CHECK VOLTAGES AND AUDIO FREQUENCY DISTORTION
K READ AND FOLLOW FLOW CHARTS AND SCHEMATIC DIAGRAMS
FOR FAULT ISOLATION AND TROUBLESHOOTING
OSR JOB INVENTORY TASK STATEMENTS:
4 G0282 A INSTALL COMMUNICATIONS PATCH PANELS
4 G0290 A INSTALL INTERCOM SYSTEMS

TASK #: 02280
ALIGN/ADJUST OJ-314 CONSOLE
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: BI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2FSC-157 AND T.O. 31W2-2FSC-167
TTT: 5
SME OPINION: 5
EQUIPMENT:
TOOL KIT, CABLES AND ADAPTER, AUDIO OSCILLATOR, ANALOG
MULTIMETER, DISTORTION ANALYZER, DIGITAL VOLTMETER, OSCILLOSCOPE,
BRIDGING TRANSFORMER, AC-VTVM (VACUUM TUBE VOLTMETER), TELEPHONE
TEST SET, AUDIO TEST SET
REFERENCES:
T.O. 31W2-2FSC-157
T.O. 31W2-2FSC-167
CONDITIONS CUES:
COND: IN-TOWER, POWER ON, SYSTEM PARTIALLY DISABLED, 2-MAN
CUE: PMI FINDING, USER COMPLAINT, COMPONENT REPLACEMENT
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 I 0410 3.38 14.0 17.0 16.0 9.0 4.01 7.0
 304X4 K 0555 2.48 9.0 10.0 9.0 5.0 5.14 7.0
 304X4 I 0415 2.92 10.0 11.0 11.0 5.0 4.24 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A ALIGN/ADJUST CONSOLE AMPLIFIER MINOR AMPLIFIER GAIN
- A ALIGN/ADJUST CONSOLE AMPLIFIER RECEIVE AMPLIFIER GAIN
- A ALIGN/ADJUST RECEIVE AMPLIFIER LEVEL CONTROL
- A ALIGN/ADJUST RECEIVE AMPLIFIER BOX AMPLIFIER
- A ALIGN/ADJUST LINE AMPLIFIER TERMINATION UNIT TRANSMIT
- A ALIGN/ADJUST LINE AMPLIFIER TERMINATION UNIT RECEIVE
- A ALIGN/ADJUST LINE AMPLIFIER TERMINATION UNIT SIDETONE
- A ALIGN/ADJUST HYBRID BALANCE NETWORK VOICE PAGE AND AUTO SIGNALING
- A ALIGN/ADJUST HYBRID BALANCE NETWORK TRANSMIT AUDIO RETURN
- A ALIGN/ADJUST HYBRID BALANCE NETWORK SIGNALING UNIT
- K READ AND FOLLOW FLOW CHARTS AND SCHEMATIC DIAGRAMS FOR FAULT ISOLATION AND TROUBLESHOOTING

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0410 A ADJUST INTERCOM SYSTEMS
- 4 K0555 A ALIGN INTERCOM EQUIPMENT DISCRETE PARTS
- 4 I0415 A ALIGN INTERCOM SYSTEMS

TASK #: 02290

TROUBLESHOOT OJ-314 POWER SUPPLIES

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: INDEFINITE

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31W2-2FSC-157 AND T.O. 31W2-2FSC-167

TTT: 5

SME OPINION: 5

EQUIPMENT:

TOOL KIT, VACUUM TUBE VOLTMETER (VTVM), OSCILLOSCOPE,
 DIGITAL MULTIMETER

REFERENCES:

T.O. 31W2-2FSC-157

T.O. 31W2-2FSC-167

CONDITIONS CUES:

COND: IN-TOWER, POWER ON/OFF, 2-MAN, EQUIPMENT OFF-LINE

CUE: PMI FINDING, USER COMPLAINT, POWER SUPPLY FAILURE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 J 0518 5.30 43.0 42.0 41.0 20.0 5.34 12.0
 304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0
 304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK AUDIO ALARM, CONSOLE BUTTON LIGHTS, AND POWER SUPPLY METERS (FOR LOW/NO INDICATION)
- A CHECK EXTENT OF PROBLEM ACROSS CONSOLE POSITIONS
- A CHECK NEGATIVE/POSITIVE OUTPUT VOLTAGES OF POWER SUPPLY SUBASSEMBLIES
- K READ AND FOLLOW FLOW CHARTS AND SCHEMATIC DIAGRAMS FOR FAULT ISOLATION AND TROUBLESHOOTING
- K ISOLATE FAULTY NEGATIVE 27 VOLT SYSTEM
- K ISOLATE FAULTY NEGATIVE 12 VOLT SYSTEM
- K ISOLATE FAULTY POSITIVE 27 VOLT SYSTEM
- A REMOVE/REPLACE POWER SUPPLY SUPPLY COMPONENTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0518 A BENCH CHECK POWER SUPPLY EQUIPMENT
- 4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS
- 4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DISCRETE PARTS

TASK #: 02300
 ALIGN/ADJUST OJ-314 POWER SUPPLIES
 DUTY CODE: X4
 TASK STATUS: 3-KP
 TIMES ANALYZED: 2
 TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: INDEFINITE
 OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31W2-2FSC-157 AND T.O. 31W2-2FSC-167
 TTT: 5
 SME OPINION: 5
 EQUIPMENT:
 TOOL KIT, DIGITAL VOLTmeter, VACUUM TUBE VOLTMETER (VTVM),
 OSCILLOSCOPE
 REFERENCES:
 T.O. 31W2-2FSC-157
 T.O. 31W2-2FSC-167
 CONDITIONS CUES:
 COND: IN-TOWER, POWER ON/OFF, EQUIPMENT OFF-LINE, 2-MAN
 CUE: PMI FINDING, USER COMPLAINT, POWER SUPPLY COMPONENT
 REPLACEMENT
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 K 0579 4.55 44.0 43.0 39.0 18.0 5.05 12.0
 304X4 K 0548 3.40 11.0 12.0 12.0 8.0 5.43 7.0
 304X4 K 0549 2.45 7.0 6.0 5.0 3.0 5.43 7.0
 ACTIVITIES SKILL KNOWLEDGE:
 A ALIGN/ADJUST BATTERY FLOAT VOLTAGE
 A ALIGN/ADJUST EQUALIZE VOLTAGE
 A ALIGN/ADJUST POWER INVERTER
 A ALIGN/ADJUST LOW VOLTAGE DISCONNECT
 OSR JOB INVENTORY TASK STATEMENTS:
 4 K0548 A ALIGN AUXILIARY EQUIPMENT POWER SUPPLY UNIT DISCRETE
 PARTS
 4 K0549 A ALIGN BACKUP POWER EQUIPMENT DISCRETE PARTS
 4 K0579 A BENCH CHECK POWER SUPPLY UNITS

TASK #: 02310
 INSPECT PACERBOUNCE RT-1446 TRANSCEIVER
 DUTY CODE: X4
 TASK STATUS: 3-KP
 TIMES ANALYZED: 1
 TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: 14, 28, 336
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 32R2-2URC-86 AND T.O. 31R2-2URC-81
 TTT: 3
 SME OPINION: 3
 EQUIPMENT:
 BITE, WATTMETER, DUMMY LOAD, FREQUENCY COUNTER, TOOL KIT
 REFERENCES:
 T.O. 32R2-2URC-86WC-1
 T.O. 31R2-2URC-81
 CONDITIONS CUES:
 COND: INDOORS/OUTDOORS, POWER ON, SAFETY OBSERVER
 CUE: PMI, OPERATOR COMPLAINT, FAILED MODULE COMPONENT
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
 ACTIVITIES SKILL KNOWLEDGE:
 A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
 A PERFORM BITE CHECK
 A PERFORM FREQUENCY CHECK
 K INTERPRET BITE ERROR CODES
 K RECOGNIZE WHEN TO PERFORM MANUAL TROUBLESHOOTING
 A INSPECT DC OPERATION
 OSR JOB INVENTORY TASK STATEMENTS:
 4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 02320
TROUBLESHOOT PACERBOUNCE RT-1446 TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: QUARTERLY OR INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-86 AND T.O. 31R2-2URC-81
TTT: NONE
SME OPINION: 3
EQUIPMENT:
WATTMETER, DUMMY LOAD, TOOL KIT, FREQUENCY COUNTER, BITE,
SIGNAL GENERATOR, DIGITAL VOLTMETER, SOLDERING EQUIPMENT
REFERENCES:
T.O. 31R2-2URC-86WC-1
T.O. 31R2-2URC-81
CONDITIONS CUES:
COND: INDOORS/OUTDOORS, POWER ON/OFF, SAFETY OBSERVER
CUE: PMI FINDING, OPERATOR COMPLAINT, SYSTEM MODULE FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0377 6.07 43.0 44.0 41.0 20.0 6.55 12.0
304X4 H 0396 4.78 29.0 31.0 34.0 22.0 3.82 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY POWER SUPPLY ASSEMBLY CIRCUIT CARDS
AND COMPONENTS
K ISOLATE FAULTY AFSK CIRCUIT CARD
K ISOLATE FAULTY AGC/TGC ASSEMBLY CIRCUIT CARD
K ISOLATE FAULTY FIRST CONVERTER CIRCUIT CARD
K ISOLATE FAULTY REF/BFO CIRCUIT CARD
K ISOLATE FAULTY SYNTHESIZER ASSEMBLY
K ISOLATE FAULTY XCVR CONTROL ASSEMBLY
K ISOLATE FAULTY RC INTERFACE ASSEMBLY
K ISOLATE FAULTY FRONT PANEL ASSEMBLY
K ISOLATE FAULTY DISPLAY ASSEMBLY
K ISOLATE FAULTY 100 WATT PA 12 VOLT CIRCUIT CARD
K ISOLATE FAULTY OSCILLATOR ASSEMBLY RF
K ISOLATE FAULTY INTERCONNECT ASSEMBLY (DEPOT ONLY)
K ISOLATE FAULTY LPA/CPLR INTERFACE ASSEMBLY
K ISOLATE FAULTY LOW PASS FILTER ASSEMBLY
K ISOLATE FAULTY IF FILTER ASSEMBLY
K ISOLATE FAULTY MULTI-VOLTAGE SUPPLY ASSEMBLY
K ISOLATE FAULTY EXCITER ASSEMBLY
K ISOLATE FAULTY RECEIVER ASSEMBLY
K ISOLATE FAULTY AUDIO INTERFACE ASSEMBLY
A REMOVE/REPLACE RT-1446 CIRCUIT CARDS AND RELATED
PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 H0377 K ISOLATE MALFUNCTIONS WITHIN SIDE BAND EQUIPMENT
4 H0396 A REMOVE OR INSTALL HF SYSTEM LRU

TASK #: 02330
ALIGN/ADJUST PACERBOUNCE RT-1446 TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: QUARTERLY OR INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-86 AND T.O. 31R2-2URC-81
TTT: NONE
SME OPINION: 5
EQUIPMENT:
WATTMETER, DUMMY LOAD, TOOL KIT, FREQUENCY COUNTER, BITE,
SPECTRUM ANALYZER, SIGNAL GENERATOR (RF AND AF) AC VOLTMETER,
RF MILLIVAC, DIGITAL VOLTMETER
REFERENCES:
T.O. 31R2-2URC-86WC-1
T.O. 31R2-2URC-81
CONDITIONS CUES:
COND: INDOORS/OUTDOORS, POWER ON/OFF, SAFETY OBSERVER
CUE: PMI FINDING, OPERATOR COMPLAINT, MODULE REPLACEMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST EXCITER ASSEMBLY
A ALIGN/ADJUST FRONT PANEL ASSEMBLY
A ALIGN/ADJUST POWER SUPPLY
A ALIGN/ADJUST RECEIVER ASSEMBLY
K ALIGN/ADJUST AFSK CIRCUIT CARD
K ALIGN/ADJUST AGC/TGC ASSEMBLY CIRCUIT CARD
K ALIGN/ADJUST AUDIO INTERFACE ASSEMBLY
K ALIGN/ADJUST FIRST CONVERTER CIRCUIT CARD
K ALIGN/ADJUST IF FILTER ASSEMBLY
K ALIGN/ADJUST LOW PASS FILTER ASSEMBLY
K ALIGN/ADJUST MULTI-VOLTAGE SUPPLY ASSEMBLY
K ALIGN/ADJUST OSCILLATOR ASSEMBLY RF
K ALIGN/ADJUST REF/BFO CIRCUIT CARD
K ALIGN/ADJUST SYNTHESIZER ASSEMBLY
K ALIGN/ADJUST XCVR CONTROL ASSEMBLY
K ALIGN/ADJUST 100 WATT PA 12 VOLT CIRCUIT CARD (DEPOT
ONLY)
OSR JOB INVENTORY TASK STATEMENTS:
4 J0497 A ALIGN SIDE BAND EQUIPMENT

TASK #: 02340
TROUBLESHOOT PACERBOUNCE AM7223/URC LINEAR POWER AMPLIFIER (LPA) (500W)
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-101
TTT: NONE
SME OPINION: 3
THIS ITEM IS INSPECTED IN CONJUNCTION WITH THE RT-1446.
EQUIPMENT:
WATTMETER, DUMMY LOAD, TOOL KIT, BITE
REFERENCES:
T.O. 31R2-2URC-101
CONDITIONS CUES:
COND: POWER ON, INDOORS OR FIELD CONDITIONS, SAFETY OBSERVER
CUE: PMI FINDING, OPERATOR PROBLEMS, FAILED MODULE
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0275 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0396 4.78 29.0 31.0 34.0 22.0 3.82 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM OPERATION CHECK
- K ISOLATE FAULTY AM7223/URC MODULES/PARTS
- K ISOLATE FAULTY LOW VOLTAGE FILTER SUPPLY
- K ISOLATE FAULTY RECTIFIER BLEEDER BOARD
- K ISOLATE FAULTY POWER CONTROL POWERBOARD
- K ISOLATE FAULTY LOW VOLTAGE POWER SUPPLY
- K ISOLATE FAULTY TUBE POWERBOARD ASSEMBLY
- K ISOLATE FAULTY FRONT PANEL ASSEMBLY
- K ISOLATE FAULTY MICRO CONTROL ASSEMBLY
- K ISOLATE FAULTY DC CONTROL ASSEMBLY
- K ISOLATE FAULTY OUTPUT FILTER ASSEMBLY
- K ISOLATE FAULTY THERMAL SENSOR ASSEMBLY
- K ISOLATE FAULTY TANK ASSEMBLY
- A REMOVE/REPLACE FAULTY LPA MODULES/PARTS
- K INTERPRET FAULT ERROR CODES

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT
- 4 H0396 A REMOVE OR INSTALL HF SYSTEM LRU

TASK #: 02350

ALIGN/ADJUST PACERBOUNCE AM7223/URC LINEAR POWER AMPLIFIER (LPA) (500W)

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: INDEFINITE

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): T.O. 31R2-2URC-101

TTT: NONE

SME OPINION: 5

EQUIPMENT:

DUMMY LOAD, ELECTRONIC VOLTMETER, DIGITAL MULTIMETER, 100 WATT TRANSEIVER, TOOL KIT

REFERENCES:

T.O. 31R2-2URC-101

CONDITIONS CUES:

COND: INDOORS OR IN FIELD, POWER ON, SAFETY OBSERVER

CUE: DEGRADATION OF EQUIPMENT, MODULE/ASSEMBLY REPLACEMENT

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A ALIGN/ADJUST NULL ADJUSTMENT
- A ALIGN/ADJUST FORWARD POWER SAMPLE
- A ALIGN/ADJUST + 13.5 VOLTS DC
- A ALIGN/ADJUST LOOP GAIN CONTROL
- A ALIGN/ADJUST CH/FSK POWER
- A ALIGN/ADJUST COUPLER TUNE POWER
- A ALIGN/ADJUST POWER CONTROL
- A ALIGN/ADJUST MAX PLATE CURRENT

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 02360
TROUBLESHOOT PACERBOUNCE PP7913/URC POWER SUPPLY AND EXTERNAL GENERATOR
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 35C1-2-892-1
TTT:
SME OPINION: 3 OR 5

EQUIPMENT:
TOOL KIT, ANALOG MULTIMETER

REFERENCES:
T.O. 35C1-2-892-1

CONDITIONS CUES:
COND: ON-SITE OR IN-SHOP, POWER OFF, TWO-MAN TEAM
CUE: POWER FAILURE

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0
304X4 K 0579 4.55 44.0 43.0 39.0 18.0 5.05 12.0

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A ISOLATE FAULTY TRANSFORMERS AND THREE PHASE
A ISOLATE FAULTY RELAYS
A ISOLATE FAULTY RESISTORS
A ISOLATE FAULTY SEMICONDUCTORS DEVICES
A ISOLATE FAULTY FAN ASSEMBLY
A ISOLATE FAULTY CIRCUIT BREAKERS
A REMOVE/REPLACE POWER SUPPLY PARTS
A TURN OFF POWER
A REMOVE/INSTALL POWER SUPPLY ASSEMBLY

OSR JOB INVENTORY TASK STATEMENTS:
4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS
4 K0579 A BENCH CHECK POWER SUPPLY UNITS

TASK #: 02370
TROUBLESHOOT PACERBOUNCE AM7224/URC LINEAR POWER AMPLIFIER (LPA) (1KW)
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1

TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, YES (AS LONG AS PROBLEM DOESN'T INVOLVE TEST EQUIPMENT BEYOND THE BITE)

QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-121
TTT: 3
SME OPINION: 3

EQUIPMENT:
TOOL KIT, FREQUENCY COUNTER, DUMMY LOAD, WATTMETER, BITE (MANUAL AND AUTO), CONNECTING CABLES AND ADAPTORS, SOLDERING KIT

REFERENCES:
T.O. 31R2-2URC-121

CONDITIONS CUES:
COND: IN-SHOP OR ON-SITE, POWER ON/OFF, OFF-LINE
CUE: PMI FINDING, USER COMPLAINT

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM OPERATION CHECK
- K ISOLATE FAULTY AM7224/URC MODULES/PARTS
- K ISOLATE FAULTY POWER CONTROL POWERBOARD
- K ISOLATE FAULTY FRONT PANEL ASSEMBLY
- K ISOLATE FAULTY MICRO CONTROL ASSEMBLY
- K ISOLATE FAULTY THERMAL SENSOR ASSEMBLY
- K ISOLATE FAULTY TANK ASSEMBLY
- K ISOLATE FAULTY TUNE CAP ASSEMBLY
- K ISOLATE FAULTY ELECTRON TUBE ASSEMBLY
- K ISOLATE FAULTY VSWR/XMFR POWER BOARD ASSEMBLY
- K ISOLATE FAULTY FAN INVERTER POWER BOARD ASSEMBLY
- K ISOLATE FAULTY INTERCONNECT POWER ASSEMBLY
- K ISOLATE FAULTY LOW PASS FILTER ASSEMBLY
- K ISOLATE FAULTY CONNECTOR POWER BOARD ASSEMBLY
- K ISOLATE FAULTY FAN ASSEMBLY
- A REMOVE/REPLACE FAULTY LPA MODULES/PARTS
- K INTERPRET FAULT ERROR CODES

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 02380

ALIGN/ADJUST PACERBOUNCE AM7224/URC LINEAR POWER AMPLIFIER (LPA) (1KW)

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: ANNUALLY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: N/A

TNG REFERENCE(S): T.O. 31R2-2URC-121

TTT: NONE

SME OPINION: 3

EQUIPMENT:

TOOL KIT, ELECTRONIC VOLTMETER 410C, DIGITAL MULTIMETER,
WATTMETER, DUMMY LOAD, SPECIALIZED CONNECTING CABLES

REFERENCES:

T.O. 31R2-2URC-121

CONDITIONS CUES:

COND: IN-SHOP, POWER ON/OFF, EQUIPMENT OFF-LINE

CUE: PMI FINDING, USER COMPLAINT, FAILED LRU'S

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A ALIGN/ADJUST RF PLATE SAMPLE
- A ALIGN/ADJUST NULL
- A ALIGN/ADJUST FORWARD POWER SAMPLE
- A ALIGN/ADJUST REFLECTIVE SAMPLE
- A ALIGN/ADJUST LOOP GAIN CONTROL
- A ALIGN/ADJUST CW/FSK POWER
- A ALIGN/ADJUST COUPLER TUNE POWER
- A ALIGN/ADJUST POWER CONTROL
- A ALIGN/ADJUST MAX PLATE CURRENT
- S FABRICATE PUSH ON MINIATURE CONNECTORS/CABLES (PROBABLY UNDER FIELD CONDITIONS)

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 02390
INSPECT PACERBOUNCE CU2310/URC ANTENNA COUPLER
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 28, 180
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-116 AND T.O. 31R2-2URC-111
TTT: 5
SME OPINION: 3
EQUIPMENT:
DUMMY LOAD, WATTMETER (THRULINE)
REFERENCES:
T.O. 31R2-2URC-116WC-1
T.O. 31R2-2URC-111
CONDITIONS CUES:
COND: NORMALLY OUTDOORS, POWER ON
CUE: PMI, ANTENNA COUPLER MALFUNCTION,
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0456 3.30 18.0 18.0 17.0 12.0 3.65 7.0
304X4 M 0630 2.30 23.0 25.0 23.0 14.0 3.98 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM BITE CHECK OF SYSTEM
A INSPECT VISUALLY FOR OBVIOUS DEFECTS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0456 A OPERATIONALLY CHECK FIXED ANTENNA SYSTEMS
4 M0630 A OPERATIONALLY CHECK MOBILE ANTENNA SYSTEMS

TASK #: 02400
TROUBLESHOOT PACERBOUNCE CU2310/URC ANTENNA COUPLER
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-111
TTT: 5
SME OPINION: 3
EQUIPMENT:
RT1446 BIT TEST, DUMMY LOAD, WATTMETER, TOOL KIT
REFERENCES:
T.O. 31R2-2URC-111
CONDITIONS CUES:
COND: OUTDOORS, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, FAILED MODULE/SYSTEM PART
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0565 4.00 29.0 29.0 27.0 14.0 5.65 11.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY ANTENNAS
K ISOLATE FAULTY LOGIC ASSEMBLY
K ISOLATE FAULTY LOWER SHELF ASSEMBLY
K ISOLATE FAULTY DC MOTORS
K ISOLATE FAULTY LOGIC CIRCUITS
A REMOVE/REPLACE ANTENNA COUPLER/PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 K0565 A BENCH CHECK ANTENNA COUPLERS

TASK #: 02410
ALIGN/ADJUST PACERBOUNCE CU2310/URC
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-111
TTT: 5
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, DUMMY LOAD, ELECTRONIC VOLTMETER WITH
AC PROBE & T-CONNECTOR, 100 WATT TRANSCEIVER, TOOL KIT
REFERENCES:
T.O. 31R2-2URC-111
CONDITIONS CUES:
COND: INDOORS, WORKBENCH
CUE: PMI FINDING, USER COMPLAINT, FAILED MODULE OR SYSTEM PART
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0544 4.25 41.0 39.0 35.0 16.0 6.07 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST LOGIC ASSEMBLY CIRCUIT
A ALIGN/ADJUST LOWER SHELF ASSEMBLY
A ALIGN/ADJUST BALL GAP ASSEMBLY
OSR JOB INVENTORY TASK STATEMENTS:
4 K0544 A ALIGN ANTENNA COUPLER COMPONENTS

TASK #: 02420
TROUBLESHOOT PACERBOUNCE C-11329/URC REMOTE CONTROL UNIT
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-91 AND T.O. 31R2-2URC-96WC-1
TTT: NONE
SME OPINION: 3
ITEM IS INSPECTED IN CONJUNCTION WITH RT-1446
EQUIPMENT:
RT-1446 BITE, DUMMY LOAD, WATTMETER, TOOL KIT
REFERENCES:
T.O. 31R2-2URC-91
T.O. 31R2-2URC-96WC-1
CONDITIONS CUES:
COND: AT OPERATORS POSITION, POWER ON, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, MODULE/SYSTEM MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0581 3.52 30.0 29.0 25.0 11.0 5.17 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM RT-1446 BITE CHECK
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
K ISOLATE FAULTY FRONT PANEL ASSEMBLY
K ISOLATE FAULTY DISPLAY ASSEMBLY
K ISOLATE FAULTY FRONT PANEL POWER ASSEMBLY
K ISOLATE FAULTY AUDIO MICROPROCESSOR ASSEMBLY
K ISOLATE FAULTY AUDIO INTERFACE ASSEMBLY
K ISOLATE FAULTY MULTIVOLTAGE CONVERTER ASSEMBLY
A REMOVE/REPLACE REMOTE CONTROL UNIT/PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 K0581 A BENCH CHECK REMOTE CONTROL UNITS

TASK #: 02430
ALIGN/ADJUST PACERBOUNCE C-11329/URC REMOTE CONTROL UNIT
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URC-91
TTT: NONE
SME OPINION: 3
EQUIPMENT:
RT-1446 BITE, DUMMY LOAD, WATTMETER, TOOL KIT
REFERENCES:
T.O. 31R2-2URC-91
CONDITIONS CUES:
COND: AT OPERATORS POSITION OR IN-SHOP, POWER ON/OFF, SAFETY
OBSERVER
CUE: MODULE REPLACEMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0560 2.97 18.0 19.0 16.0 8.0 5.60 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST MULTI-VOLTAGE SUPPLY ASSEMBLY
A ALIGN/ADJUST AUDIO INTERFACE ASSEMBLY
A ALIGN/ADJUST AUDIO MICROPROCESSOR ASSEMBLY
OSR JOB INVENTORY TASK STATEMENTS:
4 K0560 A ALIGN REMOTE CONTROL UNIT DISCRETE PARTS

TASK #: 02440
INSPECT AN/PRC-25 AN/PRC-77
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, INJURY
HOW OFTEN: NOT DETERMINED FOR THIS WORKCENTER
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES, BUT NOT USED
TNG REFERENCE(S): QTP 304X4-30Q AND T.O. 31R2-2PRC77-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
ANOTHER AN/PRC-77 RADIO SET, FREQUENCY COUNTER, FREQUENCY
GENERATOR, WATTMETER, DISTORTION ANALYZER, DIGITAL VOLTMETER,
ANALOG MULTIMETER
REFERENCES:
T.O. 31R2-2PRC77-1
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0382 4.82 22.0 26.0 26.0 17.0 4.07 11.0
304X4 H 0392 6.63 70.0 64.0 55.0 32.0 4.30 18.0
304X4 H 0393 6.33 53.0 50.0 43.0 27.0 4.23 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT VISUALLY FOR CLEANLINESS AND DAMAGE
A CHECK TRANSMIT FREQUENCY
A CHECK RECEIVE ACCURACY
A CHECK POWER OUTPUT
A CHECK RECEIVE SQUELCH
A CHECK A/DIO RECEIVE DISTORTION
OSR JOB INVENTORY TASK STATEMENTS:
4 H0392 A OPERATIONALLY CHECK UHF EQUIPMENT
4 H0393 A OPERATIONALLY CHECK VHF EQUIPMENT
4 H0362 A OPERATIONALLY CHECK FM EQUIPMENT

TASK #: 02450
TROUBLESHOOT AN/PRC-25 AN/PRC-77
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: TWO WEEKS OR SIX MONTHS
OJT TRAINABLE: YES, NO, TEST EQUIPMENT
QTP ADEQUATE: YES, BUT NOT USED
TNG REFERENCE(S): QTP 304X4-30Q AND T.O. 31R2-2PRC77-1
TTT: 5
SME OPINION: 5
SOME TASK STEPS NOT YET PERFORMED BY MAINTENANCE PERSONS

EQUIPMENT:
AUDIO OSCILLATOR, SIGNAL GENERATOR, ANALOG MULTIMETER,
DIGITAL VOLTMETER, FREQUENCY COUNTER, OSCILLOSCOPE,
WATTMETER, DUMMY LOAD, POWER SUPPLY, MODULATION METER,
CAPACITOR TESTER, TOOL KIT, SOLDERING KIT

REFERENCES:

T.O. 31R2-2PRC77-1

CONDITIONS CUES:

COND: IN SHOP
CUE: USER COMPLAINT OR RESULT OF TROUBLESHOOTING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0372 4.60 16.0 21.0 21.0 13.0 6.61 11.0

ACTIVITIES SKILL KNOWLEDGE:
A CHECK BATTERY POWER
A CHECK TRANSMIT FREQUENCY
A CHECK RECEIVE ACCURACY
A CHECK POWER OUTPUT
A CHECK RECEIVE SQUELCH
A CHECK AUDIO RECEIVE DISTORTION
K ISOLATE FAULTY SUBASSEMBLIES, CIRCUIT CARDS, AND
COMPONENT PARTS
A REMOVE/REPLACE SUBASSEMBLIES, CIRCUIT CARDS, AND
COMPONENT PARTS

OSR JOB INVENTORY TASK STATEMENTS:

4 H0372 K ISOLATE MALFUNCTIONS WITHIN FREQUENCY MODULATION (FM)
EQUIPMENT

TASK #: 02460
ALIGN AN/PRC-25 AN/PRC-77 TUNING CAPACITORS
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, SYSTEM KNOWLEDGE
QTP ADEQUATE: YES, BUT NOT USED
TNG REFERENCE(S): QTP 304X4-30Q AND T.O. 31R2-2PRC77-1
TTT: 5
SME OPINION: 5

EQUIPMENT:

CAPACITOR CHECKER

REFERENCES:

T.O. 31R2-2PRC77-1

CONDITIONS CUES:

COND: IN SHOP
CUE: TUNED FREQUENCY DOES NOT MATCH MEASURED FREQUENCY
JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0490 4.88 15.0 21.0 21.0 13.0 6.07 11.0

ACTIVITIES SKILL KNOWLEDGE:
A ADJUST TUNING CAPACITOR
A CHECK CAPACITANCE RANGE

OSR JOB INVENTORY TASK STATEMENTS:
4 J0490 A ALIGN FREQUENCY MODULATION (FM) EQUIPMENT

TASK #: 02470
ALIGN AN/PRC-25 AN/PRC-77 TONE GENERATOR
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: THREE MONTHS
OJT TRAINABLE: YES, NO, TEST EQUIPMENT
QTP ADEQUATE: YES, BUT NOT USED
TNG REFERENCE(S): QTP 304X4-30Q AND T.O 31R2-2PRC77-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
AUDIO OSCILLATOR, SIGNAL GENERATOR, ANALOG MULTIMETER,
DIGITAL VOLTMETER
REFERENCES:
T.O. 31R2-2PRC77-1
CONDITIONS CUES:
COND: IN SHOP
CUE: TRANSMIT SQUELCH FUNCTION DOES NOT WORK
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0490 4.88 15.0 21.0 21.0 13.0 6.07 11.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK RF OUTPUT
A ADJUST TONE GENERATOR FREQUENCY
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
4 J0490 A ALIGN FREQUENCY MODULATION (FM) EQUIPMENT

TASK #: 02480
INSPECT R-2174 (P)/URR HF RADIO RECEIVER
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 28, 336
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URR-256WC-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR, HEADPHONE SET, SPECIAL CLEANING SOLVENT,
TOOL KIT
REFERENCES:
T.O. 31R2-2URR-256WC-1
CONDITIONS CUES:
COND: INDOORS, TWO MAN TEAM
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0505 6.23 28.0 31.0 32.0 17.0 5.65 12.0
ACTIVITIES SKILL KNOWLEDGE:
A CLEAN RECEIVER
A CHECK STATUS LITE BULBS FOR LIT CONDITION
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS TO
INCLUDE CHECKING RECEIVER AND CIRCUIT BOARDS FOR
CORROSION
A CHECK FOR BLOWN FUSES
A PERFORM AGC CHECK
A CHECK LCD BITE METER READINGS
A PERFORM TURN/OFF PROCEDURES
OSR JOB INVENTORY TASK STATEMENTS:
4 J0505 A BENCH CHECK HF RECEIVERS

TASK #: 02490
TROUBLESHOOT R-2174 (P)/URR HF RADIO RECEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URR-251
TTT: 5
SME OPINION: 5
EQUIPMENT:
SIGNAL GENERATOR, BITE TEST LOGIC CIRCUIT, HEADPHONE SET,
ANALOG MULTIMETER, OSCILLOSCOPE, FREQUENCY COUNTER, TOOL KIT
REFERENCES:
T.O. 31R2-2URR-251
CONDITIONS CUES:
COND: INSIDE, 2 MAN TEAM
CUE: PMI SYSTEM FINDING, RECEIVER MALFUNCTION, RECEIVER FAILURE,
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0505 6.23 28.0 31.0 32.0 17.0 5.65 12.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM BITE CHECK
A ISOLATE FAULTY A2 FIRST MIXER CIRCUIT CARD
A ISOLATE FAULTY A3 SECOND MIXER CIRCUIT CARD
A ISOLATE FAULTY A4 MAIN IF/AF CIRCUIT CARD
A ISOLATE FAULTY A5 INDEPENDENT SIDEBAND CIRCUIT CARD
A ISOLATE FAULTY A6A2 MICROCOMPUTER (MEMORY PORTION)
CIRCUIT CARD
A ISOLATE FAULTY A7 FIRST AND THIRD LO SYNTHESIZER
CIRCUIT CARD
A ISOLATE FAULTY A8 SECOND LO SYNTHESIZER CIRCUIT CARD
A ISOLATE FAULTY A9 CIRCUIT CARD (FRONT PANEL)
A ISOLATE FAULTY IF BANDWIDTH FILTERS
A ISOLATE FAULTY POWER SUPPLY
A ISOLATE FAULTY BITE
A ISOLATE FAULTY KEYPAD
A REMOVE/REPLACE SUBASSEMBLIES, CIRCUIT CARDS, AND
PARTS
K INTERPRET BITE ERROR CODES
OSR JOB INVENTORY TASK STATEMENTS:
4 J0505 A BENCH CHECK HF RECEIVERS

TASK #: 02500
ALIGN/ADJUST R-2174 (P)/URR HF RADIO RECEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 28
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URR-256WC-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR, HEADPHONE SET, TOOK KIT
REFERENCES:
T.O. 31R2-2URR-256WC-1
CONDITIONS CUES:
COND: INDOORS, TWO MAN TEAM
CUE: PMI, CIRCUIT CARD REPLACEMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST AUDIO FREQUENCY GAIN CONTROL
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 02510
INSPECT R-2174 (P)/URR HF RADIO RECEIVER FRONT PANEL
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URR-251
TTT: 5
SME OPINION: 3
EQUIPMENT:
COMMON HAND TOOLS, CLEANING SOLVENT
REFERENCES:
T.O. 31R2-2URR-251
CONDITIONS CUES:
COND: INDOORS, 2 MAN TEAM
CUE: INCLUDED IN 336 PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0562 2.42 2.0 2.0 3.0 4.0 5.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN FRONT PANEL AS NEEDED
A CHECK ENCODER FOR DAMAGE/SCRATCH MARKS
A CHECK ENCODER DISK FOR SCRATCHES, MARS, DENTS, WAR-
PAGE, AND ASSEMBLED SHAFT FOR EXCESS PLAY
A CHECK IF/AF GAIN CONTROLS FOR FREEDOM OF OPERATION
AND DAMAGE
A CHECK THE PHONE JACKS AND POWER-ON SWITCH FOR DAMAGE
OSR JOB INVENTORY TASK STATEMENTS:
4 K0562 ALIGN SIGNAL CONDITIONING EQUIPMENT PARTS

TASK #: 02520
TROUBLESHOOT R-2174 (P)/URR HF RADIO RECEIVER FRONT PANEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: UNKNOWN
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URR-251
TTT: 5
SME OPINION: 5
EQUIPMENT:
ANALOG MULTIMETER, TOOL KIT
REFERENCES:
T.O. 31R2-2URR-251
CONDITIONS CUES:
COND: INDOORS, 2 MAN TEAM
CUE: FRONT PANEL ASSEMBLY FAILURE, PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0505 6.23 28.0 31.0 32.0 17.0 5.65 12.0
304X4 H 0373 6.45 56.0 60.0 57.0 30.0~ 6.48 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK RESISTANCE OF IF AND AF GAIN CONTROL
A ISOLATE FAULTY POWER ON SWITCH
A CHECK RESISTANCE AND CONTINUITY OF KEYPAD S3 AND S4
(UNDERPLATE)
A ISOLATE FAULTY EDGE LIGHTING ASSEMBLY
A ISOLATE FAULTY PHONES JACK
A ISOLATE FAULTY CABLE W20
A ISOLATE FAULTY ENCODER ASSEMBLY
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 J0505 A BENCH CHECK HF RECEIVERS

TASK #: 02530
REPAIR R-2174 (P)/UUR RECEIVER FRONT PANEL ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: UNKNOWN
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2URR-251
TTT: 5
SME OPINION: 5
EQUIPMENT:
COMMON HAND TOOLS
REFERENCES:
T.O. 31R2-2URR-251
CONDITIONS CUES:
COND: INDOORS, TWO MAN TEAM
CUE: PMI FINDING, FAILURE OF FRONT PANEL COMPONENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE/REPLACE FAULTY A-9 CIRCUIT CARD
A REMOVE/REPLACE/REPAIR POWER ON SWITCH
A REMOVE/REPLACE/REPAIR KEYPAD S4 (UNDERPLATE)
A REMOVE/REPLACE/REPAIR IF GAIN CONTROL
A REMOVE/REPLACE/REPAIR AF GAIN CONTROL
A REMOVE/REPLACE/REPAIR EDGE LIGHTING ASSEMBLY
A REMOVE/REPLACE/REPAIR KEYPAD S3 (UNDERPLATE)
A REMOVE/REPLACE/REPAIR PHONES JACK
A REMOVE/REPLACE/REPAIR CABLE W20
A REMOVE/REPLACE/REPAIR ENCODER ASSEMBLY
OSR JOB INVENTORY TASK STATEMENTS:
4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS

TASK #: 02540
INSPECT THE SW-3600 4 WIRE SWITCHING SYSTEM
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 28
OJT TRAINABLE: YES, YES,
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W2-4-156-6WC1
TTT: 5
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, TELEPHONE TEST SET, LINE MATCHING TRANSFORMER,
VTVM, AUDIO OSCILLATOR, SIGNAL GENERATOR, FREQUENCY COUNTER
REFERENCES:
T.O. 31W2-4-156-6WC1
CONDITIONS CUES:
COND: IN-SHOP, EQUIPMENT RELEASED
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 G 0360 3.00 14.0 13.0 12.0 10.0 6.25 7.0
304X4 H 0389 3.53 13.0 13.0 13.0 7.0 4.18 7.0
304X4 I 0463 2.35 4.0 4.0 5.0 3.0 3.99 7.0
ACTIVITIES SKILL KNOWLEDGE:
K PERFORM EQUIPMENT OPERATION CHECKS
K PERFORM REGISTER AND ATTENDANT OPERATION CHECK
A CHECK TIMEOUT CIRCUITS
A CHECK TONE EQUIPMENT
A CLEAN EQUIPMENT
A LUBRICATE STEPPING SWITCH
A INSPECT EQUIPMENT FOR OBVIOUS DEFECTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0389 A OPERATIONALLY CHECK RADIO-TELEPHONE SYSTEMS
4 I0463 A OPERATIONALLY CHECK SIGNAL CONDITIONING OR SHAPING
EQUIPMENT
4 G0360 A TEST AND INSPECT FIXED COMMUNICATIONS SITES

TASK #: 02550
TROUBLESHOOT SW-3600 4 WIRE SWITCHBOARD
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, THEORY REQUIRED
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W2-4-156-2, T.O. 31W2-4-156-3,
AND T.O. 31W2-4-156-6WC-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE, AUDIO OSCILLATOR, MATCHING TRANSFORMER,
DIGITAL MULTIMETER, FREQUENCY COUNTER, TRANSISTOR TESTER,
AC PRECISION VOLTMETER, VTVM
REFERENCES:
T.O. 31W2-4-156-2
T.O. 31W2-4-156-3
T.O. 31W2-4-156-6WC-1
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED,
CUE: SYSTEM MALFUNCTION, NO DIAL TONE, SYSTEM FAULT INDICATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0419 2.70 7.0 5.0 5.0 2.0 6.65 7.0
304X4 I 0434 2.97 2.0 3.0 3.0 5.0 5.93 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES AND PARTS
A REMOVE/REPLACE SUBASSEMBLIES AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS
4 I0434 K ISOLATE MALFUNCTIONS WITHIN SIGNAL CONDITIONING OR
SHAPING EQUIPMENT TO LRU

TASK #: 02560
ALIGN OR ADJUST SW-3600 4 WIRE SWITCHBOARD
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO, THEORY REQUIRED
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W2-4-156-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE, AUDIO OSCILLATOR, MATCHING TRANSFORMER,
DIGITAL MULTIMETER, VTVM, FREQUENCY COUNTER, AC PRECISION
VOLTMETER
REFERENCES:
T.O. 31W2-4-156-2
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED, EQUIPMENT FAILURE
CUE: SYSTEM MALFUNCTION
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0562 2.42 2.0 2.0 3.0 4.0 5.90 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A ALIGN TELETYPE MULTIVIBRATOR A15
- A ALIGN TELETYPE MULTIVIBRATOR A12
- A ALIGN FSK RECEIVER A2
- A ALIGN FSK RECEIVER A4
- A ALIGN DIAL TONE GENERATOR
- A ALIGN 1000/20 HZ GENERATOR
- A ALIGN POWER AMPLIFIER CARD
- A ALIGN 1-6 SEC TIMER CARD A17
- A ALIGN 1-6 SEC TIMER CARDS A18 AND A19
- A ALIGN 10-75 SEC TIMER CARD A6
- A ALIGN 10-75 SEC TIMER CARD A7
- A ALIGN WIDEBAND DETECTORS
- A ALIGN DUAL FSK TRANSMITTERS
- A ALIGN STEPPING SWITCH ADJUSTMENT
- A ALIGN RELAY ADJUSTMENT

OSR JOB INVENTORY TASK STATEMENTS:

4 K0562 A ALIGN SIGNAL CONDITIONING EQUIPMENT PARTS

TASK #: 02570

TROUBLESHOOT SH-3600 4 WIRE SWITCHBOARD DISPLAY SECTION

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: MONTHLY

OJT TRAINABLE: YES, NO, THEORY REQUIRED

QTP ADEQUATE: N/A

TNG REFERENCE(S): T.O. 31W2-4-156-2, T.O. 31W2-4-156-3, AND
AND T.O. 31W2-4-156-WC-1

TTT: 5

SME OPINION: 5

EQUIPMENT:

OSCILLOSCOPE, MATCHING TRANSFORMER, FREQUENCY COUNTER,
DIGITAL MULTIMETER, AUDIO OSCILLATOR, AC PRECISION VOLTmeter,
TRANSISTOR TESTER, VTVM

REFERENCES:

T.O. 31W2-4-156-2

T.O. 31W2-4-156-3

T.O. 31W2-4-156-6WC-1

CONDITIONS CUES:

COND: IN SHOP, EQUIPMENT RELEASED,

CUE: SYSTEM MALFUNCTION, NO DIAL TONE, SYSTEM FAULT INDICATION

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0419 2.70 7.0 5.0 5.0 2.0 6.65 7.0

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY SUBASSEMBLIES AND PARTS
- A REMOVE/REPLACE SUBASSEMBLIES AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:

4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS

TASK #: 02580
TROUBLESHOOT SW-3600 4 WIRE SWITCHBOARD REGISTER DRAWER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W2-4-156-2, T.O. 31W2-4-156-3,
AND T.O. 31W2-4-156-6WC-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
VTVM, OSCILLATOR, TRANSFORMER, DIGITAL MULTIMETER,
ANALOG MULTIMETER
REFERENCES:
T.O. 31W2-4-156-2
T.O. 31W2-4-156-3
T.O. 31W2-4-156-6WC-1
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED,
CUE: SYSTEM MALFUNCTION, DELAYED ACCESS TIME, TROUBLE DIALING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0419 2.70 7.0 5.0 5.0 2.0 6.65 7.0
304X4 I 0469 1.87 3.0 3.0 3.0 2.0 4.37 2.0
304X4 J 0543 6.75 78.0 75.0 69.0 36.0 5.05 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES AND PARTS
A REMOVE/REPLACE SUBASSEMBLIES AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS
4 I0469 A REMOVE OR INSTALL AUTOMATIC SWITCHBOARD COMPONENTS
4 J0543 S SOLDER COMMUNICATIONS EQUIPMENT COMPONENTS

TASK #: 02599
TROUBLESHOOT SW-3600 4 WIRE SWITCHBOARD ATTENDANT DRAWER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W2-4-156-2, T.O. 31W2-4-156-3
AND T.O. 31W2-4-156-6WC-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
VTVM, OSCILLATOR, TRANSFORMER, DIGITAL MULTIMETER,
ANALOG MULTIMETER
REFERENCES:
T.O. 31W2-4-156-2
T.O. 31W2-4-156-3
T.O. 31W2-4-156-6WC-1
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED,
CUE: SYSTEM MALFUNCTION, DELAYED ACCESS TIME, TROUBLE DIALING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0419 2.70 7.0 5.0 5.0 2.0 6.65 7.0
304X4 I 0469 1.87 3.0 3.0 3.0 2.0 4.37 2.0
304X4 J 0543 6.75 78.0 75.0 69.0 36.0 5.05 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES AND PARTS
A REMOVE/REPLACE SUBASSEMBLIES AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS
4 I0469 A REMOVE OR INSTALL AUTOMATIC SWITCHBOARD COMPONENTS
4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS

TASK #: 02600
TROUBLESHOOT SW-3600 4 WIRE SWITCHBOARD LINE DRAWER
DUTY CODE: X0
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO, THEORY OF CIRCUIT CARD OPERATION
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W2-4-156-2 AND T.O. 31W2-4-156-3
TTT: 5
SME OPINION: 5
EQUIPMENT:
VTVM, OSCILLATOR, TRANSFORMER, DIGITAL MULTIMETER,
FREQUENCY COUNTER, OSCILLOSCOPE, ANALOG MULTIMETER,
TRANSISTOR TESTER
REFERENCES:
T.O. 31W2-4-156-2
T.O. 31W2-4-156-3
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED,
CUE: SYSTEM MALFUNCTION, UNABLE TO ACCESS, CONSTANT BUSY,
CONSTANTLY RINGING TO OPERATOR
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0419 2.70 7.0 5.0 5.0 2.0 6.65 7.0
304X4 I 0469 1.87 3.0 3.0 3.0 2.0 4.37 2.0
304X4 J 0543 6.75 78.0 75.0 69.0 36.0 5.05 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ISOLATE FAULTY SUBASSEMBLIES AND PARTS
A REMOVE/REPLACE SUBASSEMBLIES AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS
4 I0469 A REMOVE OR INSTALL AUTOMATIC SWITCHBOARD COMPONENTS

TASK #: 02610
TROUBLESHOOT SW-3600 4 WIRE SWITCHBOARD LINK DRAWER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, SOLDERING TECHNIQUES
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W2-4-156-2, T.O. 31W2-4-156-3,
AND T.O. 31W2-4-156-4
TTT: 5
SME OPINION: 3
EQUIPMENT:
VTVM, OSCILLATOR, TRANSFORMER, DIGITAL MULTIMETER,
FREQUENCY COUNTER, SOLDERING KIT, ANALOG MULTIMETER
REFERENCES:
T.O. 31W2-4-156-2
T.O. 31W2-4-156-3
T.O. 31W2-4-156-4
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED,
CUE: SYSTEM MALFUNCTION, UNABLE TO ACCESS, CONSTANT BUSY,
SINGLE LINE MALFUNCTION
JOB STANDARDS:
CIRCUIT CARD PROPERLY SEATED, LINE FUNCTIONS
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0419 2.70 7.0 5.0 5.0 2.0 6.65 7.0
304X4 I 0469 1.87 3.0 3.0 3.0 2.0 4.37 2.0
304X4 J 0543 6.75 78.0 75.0 69.0 36.0 5.05 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES, CIRCUIT CARDS, AND
COMPONENT PARTS
A REMOVE/REPLACE SUBASSEMBLIES, CIRCUIT CARDS, AND
PARTS
S PERFORM HIGH RELIABILITY SOLDERING OF INTEGRATED
CIRCUITS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS
4 I0469 A REMOVE OR INSTALL AUTOMATIC SWITCHBOARD COMPONENTS
4 J0543 S SOLDER COMMUNICATIONS EQUIPMENT COMPONENTS

TASK #: 02620
INSPECT TA-312/PT TELEPHONE SET
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 56
OJT TRAINABLE: YES
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W1-2PT-292 AND T.O. 31W1-2PT-294
TTT: 3
SME OPINION: 3
EQUIPMENT:
DUPLICATE TA-312/PT, TWO PIECES OF WIRE, FOUR D-TYPE CELL BATTERIES, CLEANING BRUSH, CLEANING RAGS AND AGENTS
REFERENCES:
T.O. 31W1-2PT-292
T.O. 31W1-2PT-294
CONDITIONS CUES:
COND: INDOORS/OUTDOORS
CUE: PMI SCHEDULE, BEFORE OR AFTER A MISSION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK AUDIO
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
OSR JOB INVENTORY TASK STATEMENTS:
4 M0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

TASK #: 02630
TROUBLESHOOT TA-312/PT TELEPHONE SET
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W1-2PT-292 AND T.O. 31W1-2PT-294
TTT: 5
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR WITH THOUSAND HERTZ TONE, COMMON HANDTOOLS, INDUCTIVE PROBE TO TRACE 1000HZ TONE, OSCILLOSCOPE, DIGITAL MULTIMETER, SOLDERING KIT
REFERENCES:
T.O. 31W1-2PT-292
T.O. 31W1-2PT-294
CONDITIONS CUES:
COND: INDOORS
CUE: PMI SCHEDULE, RADIO OR FIELDPHONE FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0543 6.75 78.0 75.0 69.0 56.0 5.05 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CLEAN BATTERY TERMINALS
A CHECK FOR BAD WIRES WITHIN THE CASING
A CHECK FOR BAD SOLDER JOINTS
A CHECK FOR LOOSE SCREWS INTERNALLY
A CLEAN CONTACTS
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
A LABEL WIRES FOR REMOVAL/REPLACEMENT OF PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0543 A SOLDER COMMUNICATIONS EQUIPMENT COMPONENTS

TASK #: 02640
ALIGN AND ADJUST TA-312/PT TELEPHONE SET
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES
QTP ADEQUATE: N/A
TNG REFERENCE(S): T.O. 31W1-2PT-292 AND T.O. 31W1-2PT-294
TTT: 3
SME OPINION: 3
EQUIPMENT:
COMMON HANDTOOLS, ALLEN WRENCHES
REFERENCES:
T.O. 31W1-2PT-292 AND 294
CONDITIONS CUES:
COND: INDOORS OR OUTDOORS
CUE: PMI OR RADIO FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST RINGER
OSR JOB INVENTORY TASK STATEMENTS:
4 M0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

TASK #: 02650
INSPECT TD-2903 TAPE DEGAUSSER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, NONE
HOW OFTEN: 28, 56, 84, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S3-4-52-6WC-1
TTT: 3
SME OPINION: 3
DEGAUSER CAN RUIN TAPE BY MAGNETISM
EQUIPMENT:
TOOL KIT, OIL, CLEANING SUPPLIES, TAPE (PRERECORDED)
REFERENCES:
T.O. 31S3-4-52-6WC-1
CONDITIONS CUES:
COND: USER SITE, POWER ON/OFF
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0380 4.97 67.0 65.0 57.0 25.0 3.61 18.0
304X4 I 0466 4.20 36.0 34.0 31.0 18.0 3.71 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A VERIFY RELIABILITY OF POWER METER M1 (NON-T.O. ITEM)
A PERFORM OPERATION CHECK OF TAPE DEGAUSER
A CLEAN INTERIOR AND EXTERIOR OF DEGAUSER
A CHECK CHASSIS
A CHECK FAN
A CHECK REEL HUB ASSEMBLY ROLLER
A CHECK REEL HUB ASSEMBLY GEARS
A CHECK TRAVELER ASSEMBLY AND GEAR
A LUBRICATE GEARS FOR MODELS NOT EQUIPPED WITH BELT
DRIVE
OSR JOB INVENTORY TASK STATEMENTS:
4 H0380 A LUBRICATE MECHANICAL PARTS OF GROUND RADIO EQUIPMENT
4 I0466 A PERFORM OPERATIONAL CHECKS OF AUDIO RECORDERS AND
REPRODUCERS

TASK #: 02660
TROUBLESHOOT TD-2903 TAPE DEGAUSSER
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S3-4-52-11
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, DIGITAL MULTIMETER, SOLDERING KIT
REFERENCES:
T.O. 31S3-4-52-11
CONDITIONS CUES:
COND: USER SITE OR IN-SHOP, POWER ON/OFF
CUE: PMI FINDING, USER COMPLAINT TAPES NOT ERASED
JOB STANDARDS:
IAW REFERENCES
CSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0483 3.40 20.0 18.0 17.0 11.0 3.97 7.0
304X4 K 0587 4.15 31.0 31.0 27.0 13.0 5.31 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ISOLATE FAULTY ELECTROMAGNETS
A ISOLATE FAULTY AC POWER
A ISOLATE FAULTY THERMOSTATIC DELAY RELAY
A ISOLATE FAULTY DRIVE MORTOR, GEAR BOX, AND HUB ASSEMBLY
A ISOLATE FAULTY TRAVELLER ASSEMBLY
A REMOVE/REPLACE DEGAUSER ELECTRICAL COMPONENTS AND MECHANICAL COMPONENTS
A CHECK DEGAUSER ELECTRICAL VOLTAGES
OSR JOB INVENTORY TASK STATEMENTS:
4 I0483 A REMOVE OR INSTALL RECORDER AND REPRODUCER LRU
4 K0587 A REMOVE OR INSTALL AUDIO RECORDER-REPRODUCER DISCRETE PARTS

TASK #: 02670
ALIGN/ADJUST TD-2903 TAPE DEGAUSSER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S3-4-52-11
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT
REFERENCES:
T.O. 31S3-4-52-11
CONDITIONS CUES:
COND: USER SITE OR IN-SHOP, POWER OFF
CUE: RECONFIGURATION OF EQUIPMENT
JOB STANDARDS:
IAW REFERENCES
CSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0546 4.80 34.0 35.0 30.0 15.0 5.96 12.0
ACTIVITIES SKILL KNOWLEDGE:
A CHANGE JUMPERS TO MATCH VOLTAGE REQUIREMENTS
A RESPACE MAGNETIC COILS FOR 2 INCH TAPE
OSR JOB INVENTORY TASK STATEMENTS:
4 K0546 A ALIGN AUDIO RECORDER-REPRODUCER DISCRETE PARTS

TASK #: 02680
INSPECT AN/TRC-176 UHF/VHF TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28, 168
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): T.O. 31R2-2TRC176-6 AND T.O. 31R2-2TRC176-1
TTT: NONE
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, POWER SUPPLY HP-6268B, WATT METER, RADIO TEST
SET AN/GRM-115, 30 DB ATTENUATOR, 6 DB ATTENUATOR, BALANCED MIXER,
DISTORTION ANALYZER, OSCILLOSCOPE, SIGNAL GENERATOR
REFERENCES:
T.O. 31R2-2TRC176-6WC-1
T.O. 31R2-2TRC176-1
CONDITIONS CUES:
COND: TWO-MAN TEAM
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA:

	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI	
304X4	H	0392	6.63	70.0	64.0	55.0	32.0	4.30	18.0
304X4	H	0393	6.33	53.0	50.0	43.0	27.0	4.23	18.0

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A PERFORM LOCAL CONTROL TEST
A PERFORM REMOTE CONTROL TEST
A PERFORM POWER OUTPUT TEST
A PERFORM MODULATION PERCENTAGE TEST
A PERFORM MAIN RECEIVER SENSITIVITY TEST
A PERFORM GUARD RECEIVER SENSITIVITY TEST
A PERFORM AUDIO OUTPUT TEST
A PERFORM ECCM TALK TEST
A PERFORM TWO ADJACENT CHANNEL CAPABILITY
A PERFORM POWER SUPPLY TEST
OSR JOB INVENTORY TASK STATEMENTS:
4 H0392 A OPERATIONALLY CHECK UHF EQUIPMENT
4 H0393 A OPERATIONALLY CHECK VHF EQUIPMENT

TASK #: 02690
TROUBLESHOOT AN/TRC-176 UHF/VHF TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE, DEGRADATION OF EQUIPMENT
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): T.O. 31R2-2URC-62 AND T.O. 31R2-2TRC176-2
TTT: NONE
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, POWER SUPPLY HP-6268B, WATT METER, RADIO TEST
SET AN/GRM-115, 30 DB ATTENUATOR, 6 DB ATTENUATOR, BALANCED
MIXER, DISTORTION ANALYZER, OSCILLOSCOPE, SIGNAL GENERATOR, AUDIO
OSCILLATOR, DUMMY LOAD, TEST CABLES, TOOL KIT
REFERENCES:
T.O. 31R2-2URC-62
T.O. 31R2-2TRC176-2
CONDITIONS CUES:
COND: TWO-MAN TEAM
CUE: EQUIPMENT FAILURE, FAULTY EQUIPMENT
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0524 6.45 57.0 51.0 42.0 19.0 6.01 18.0
304X4 J 0528 6.37 46.0 41.0 34.0 16.0 6.08 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A VERIFY RT PERFORMANCE
- K ISOLATE FAULTY A2A1A2 PS HEAT SINK REGULATOR ASSEMBLY
- K ISOLATE FAULTY CABLES
- K ISOLATE FAULTY A2A1CB1 CARD
- K ISOLATE FAULTY HOUSING ASSEMBLY
- K ISOLATE FAULTY A2A1A1 CARD
- K ISOLATE FAULTY INPUT FILTERS, FL11 AND FL12
- K ISOLATE FAULTY LOUDSPEAKER
- K ISOLATE FAULTY RADIO SET CONTROL A3 CARD
- K ISOLATE FAULTY A3A2-RSC CARD
- K ISOLATE FAULTY KEYBOARD
- K ISOLATE FAULTY LCD A3A1 CARD
- K ISOLATE FAULTY A1A1A7 POWERED REGULATOR CARD
- K ISOLATE FAULTY A1A1A8 CHASSIS CARD
- K ISOLATE FAULTY A1A1A9 POWER SWITCH CARD
- K ISOLATE FAULTY A1A1A1 DATA CONVERTER CARD
- K ISOLATE FAULTY A1A2 TRANSMITTER CARD
- K ISOLATE FAULTY A1A1A3 MODULATOR CARD
- K ISOLATE FAULTY A1A1A6 SYNTHESIZER CARD
- K ISOLATE FAULTY A1A1A4 GUARD RECEIVER CARD
- K ISOLATE FAULTY A1A1A4 MAIN RECEIVER CARD
- A REMOVE FAULTY COMPONENTS OR CARDS
- A REPLACE FAULTY COMPONENTS OR CARDS
- A TURN OFF POWER
- A DISCONNECT POWER

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0528 A BENCH CHECK VHF TRANSCEIVERS
- 4 J0524 A BENCH CHECK UHF TRANSCEIVERS

TASK #: 62700

ALIGN/ADJUST AN/TRC-176 UHF/VHF TRANSCEIVER

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: DEGRADATION OF EQUIPMENT

OJT TRAINABLE: YES

QTP ADEQUATE: YES

TNG REFERENCE(S): T.O. 31R2-2URC-62

TTT: NONE

SME OPINION: 5

EQUIPMENT:

RF SIGNAL GENERATOR, AUDIO OSCILLATOR, 6DB ATTENUATOR, RADIO TEST SET, AN/GRM-115, DISTORTION ANALYZER, POWER SUPPLY, DIGITAL VOLTMETER, WATT METER, DUMMY LOAD, BALANCE MIXER, 30DB ATTENUATOR, TEST CABLES, STANDARD TOOL BOX, OSCILLOSCOPE, FREQUENCY COUNTER

REFERENCES:

T.O. 31R2-2URC-62

CONDITIONS CUES:

COND: TWO-MAN TEAM

CUE: FAULTY EQUIPMENT

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0~6.13 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A TURN OFF POWER
- A CONNECT TEST EQUIPMENT
- A ALIGN AND ADJUST GUARD SQUELCH
- A ALIGN AND ADJUST CARRIER LEVEL AND PERCENT OF MODULATION
- A ALIGN AND ADJUST SIDETONE LEVEL
- A RETURN EQUIPMENT TO NORMAL OPERATING CONDITION

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 02710
INSPECT AN/TSC-107 (HF TRANSCEIVER) AN/URC-92
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): LWC 5 CISG 31R2-2TSC107-1, LWC 5 CISG URC-92-1,
AND T.O. 31R2-2TSC107-1

TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DUMMY LOAD, THRULINE WATTMETER,
TRANSMISSIONS TEST SET, MULTIMETER, RF VOLTMETER,
DIGITAL VOLTMETER, OSCILLOSCOPE, FREQUENCY COUNTER

REFERENCES:
LWC 5 CISG 31R2-2TSC107-1
LWC 5 CISG URC-92-1
T.O. 31R2-2TSC107-1

CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENI. 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
306X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
- A CHECK POWER SUPPLY VOLTAGES
- A CHECK RECEIVER SENSITIVITY
- A CHECK RECEIVER FREQUENCY ACCURACY
- A CHECK AUDIO OUTPUT LEVELS OF RECEIVER
- A CHECK RECEIVER SELECTIVITY
- A CHECK AMPLITUDE MODULATION (AM) TRANSMIT POWER
- A CHECK SIDEBAND TRANSMIT POWER
- A CHECK CONTINUOUS WAVE (CW) TRANSMIT POWER
- A CHECK TRANSMIT FREQUENCY ACCURACY WHEN IN (AM) MODE
- A CHECK CARRIER SUPPRESSION WHEN IN SIDEBOARD MODE
- A CLEAN TRANSCEIVER

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
- 4 M0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

TASK #: 02720
INSPECT AN/TSC-107 (UHF TRANSCEIVER) AN/ARC-164
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): LWC 5 CISG 12R2-2ARC164-2 AND
T.O. 31R2-2TSC107-1

TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DUMMY LOAD, THRULINE WATTMETER,
TRANSMISSIONS TEST SET, MULTIMETER, RF VOLTMETER, HANDTOOLS
FREQUENCY COUNTER

REFERENCES:

LWC 5 CISG 12R2-2ARC164-2
T.O. 31R2-2TSC107-1

CONDITIONS CUES:

COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0392 6.63 70.0 64.0 55.0 32.0 4.30 18.0
304X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
- A CHECK RECEIVER SENSITIVITY
- A CHECK RECEIVER FREQUENCY ACCURACY
- A CHECK AUDIO OUTPUT LEVELS OF RECEIVER
- A CHECK AMPLITUDE MODULATION (AM) TRANSMIT POWER
- A CHECK TRANSMIT FREQUENCY ACCURACY WHEN IN (AM) MODE
- A CLEAN TRANSCEIVER

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0392 A OPERATIONALLY CHECK UHF EQUIPMENT
- 4 M0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

TASK #: 02730

INSPECT AN/TSC-107 (VHF TRANSCEIVER) AN/ARC-186

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: MINOR, NONE, NONE

HOW OFTEN: 7, 28, 56, 168

OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): LWC 5 CISG 12R2-2ARC186-2 AND
T.O. 31R2-2TSC107-1

TTT: 3

SME OPINION: 3

EQUIPMENT:

RF SIGNAL GENERATOR, DUMMY LOAD, THRULINE WATTMETER,
TRANSMISSIONS TEST SET, DIGITAL MULTIMETER, RF VOLTMETER,
FREQUENCY COUNTER, HANDTOOLS

REFERENCES:

LWC 5 CISG 12R2-2ARC186-2

T.O. 31R2-2TSC107-1

CONDITIONS CUES:

COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER

CUE: PMI, PRE/POST DEPLOYMENT INSPECTION

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0393 6.33 53.0 50.0 43.0 27.0 4.23 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
- A CHECK AM RECEIVER SENSITIVITY
- A CHECK FM RECEIVER SENSITIVITY
- A CHECK AM RECEIVER SELECTIVITY
- A CHECK FM RECEIVER SELECTIVITY
- A CHECK RECEIVER FREQUENCY ACCURACY
- A CHECK AUDIO OUTPUT LEVELS OF RECEIVER
- A CHECK AMPLITUDE MODULATION (AM) TRANSMIT POWER
- A CHECK FREQUENCY MODULATION (FM) TRANSMIT POWER
- A CHECK TRANSMIT FREQUENCY ACCURACY WHEN IN (AM) MODE
- A CLEAN TRANSCEIVER

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0393 A OPERATIONALLY CHECK VHF EQUIPMENT

TASK #: 02740
INSPECT AN/TSC-107 (HF INDEPENDENT SIDEBAND TRANSMITTER) GSE-924, GSL-1900
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-494-2, T.O. 31R2-4-496-2,
AND T.O. 31R2-2TSC107-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
DUMMY LOAD, THRULINE WATTMETER, OSCILLOSCOPE, FREQUENCY COUNTER,
TRANSMISSION TEST SET, MULTIMETER, RF VOLTMETER, HANDTOOLS
REFERENCES:
T.O. 31R2-4-494-2
T.O. 31R2-4-496-2
T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A CHECK TUNE POWER
A CHECK AMPLITUDE MODULATION (AM) TRANSMIT POWER
A CHECK SIDEBAND TRANSMIT POWER
A CHECK CONTINUOUS WAVE (CW) TRANSMIT POWER
A CHECK METER READINGS ON FRONT PANEL
A CHECK FORWARD POWER FROM TRANSMITTER SET
A CHECK REFLECTED POWER FROM DUMMY LOAD
A CHECK POWER AMPLIFIER (LPA) TUBE
A CHECK CARRIER SUPPRESSION
A CHECK TRANSMIT FREQUENCY ACCURACY WHEN IN (AM) MODE
A CLEAN TRANSMITTER
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 02750
INSPECT AN/TSC-107 (HF INDEPENDENT SIDEBAND RECEIVER) GRS-920
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2TSC107-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
TRANSMISSIONS TEST SET, RF SIGNAL GENERATOR, HANDTOOLS,
CLEANING MATERIALS
REFERENCES:
T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A CHECK RECEIVE SENSITIVITY IN SIDEBAND MODE
A CHECK RECEIVE SENSITIVITY IN AM MODE
A CHECK RECEIVER SELECTIVITY IN SIDEBAND MODE
A CHECK AUDIO LEVEL OUTPUT
A CLEAN RECEIVER
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 02760
INSPECT AN/TSC-107 (MODEMS), MPC-1000/T, MD-674D, 1290/VFT, MD-1142, MD-1061
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): SEE REFERENCES
TTT: 3
SME OPINION: 3
EQUIPMENT:
TRANSMISSION TEST SET, AM/UGC-129 TELETYPEWRITTER, AM/GGM-21A
TELETYPE TEST SET, HANDTOOLS, CLEANING MATERIALS, PATCH CORDS,
SIGNAL GENERATOR
REFERENCES:
LWC 5 CISG 1061 MODEM, LWC 5 CISG MPC-1000T/LOC
LWC 5 CISG 6029 MODEM, LWC 5 CISG 31W2-2G-41
T.O. 31W2-2G-46WC-1, T.O. 31S1-4-234-1
T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0387 3.23 6.0 6.0 7.0 5.0 4.46 7.0
304X4 I 0457 2.50 7.0 9.0 10.0 6.0 3.75 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A CHECK AUDIO OUTPUT FREQUENCY ACCURACY
A CHECK AUDIO FREQUENCY OUTPUT LEVEL
A CHECK DC OUTPUT LEVEL
A PERFORM OPERATIONAL CHECK OF MODEMS
A CHECK DISTORTION
A CLEAN MODEMS
OSR JOB INVENTORY TASK STATEMENTS:
4 I0457 A OPERATIONALLY CHECK FREQUENCY SHIFT CONVERTERS
4 H0387 A OPERATIONALLY CHECK MULTIPLEX EQUIPMENT

TASK #: 02770
INSPECT AN/TSC-107 (TELETYPEWRITER) AN/UGC-29(V)1
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LWC 5 CCGP MU-734/UGC AND T.O. 31R2-2TSC107-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
MAGNETIC DATA TAPES, PATCH CORDS, HANDTOOLS, CLEANING MATERIALS
REFERENCES:
LWC 5 CCGP MU-734/UGC
T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0390 3.15 8.0 10.0 11.0 5.0 4.40 7.0
304X4 J 0520 2.90 6.0 8.0 8.0 4.0 5.70 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A PFRFORM RYTF CHFCK OF TELETYPEWRITTER (SELF TEST)
A OPERATIONALLY CHECK TELETYPEWRITERS AND MAGNETIC TAPE UNITS
A CHECK STRAPPING OPTIONS
A CLEAN MAGNETIC TAPE HEADS
S TYPING ABILITY
OSR JOB INVENTORY TASK STATEMENTS:
4 H0390 A OPERATIONALLY CHECK RADIO-TELETYPE SYSTEMS
4 J0520 A BENCH CHECK RADIO-TELETYPE EQUIPMENT

TASK #: 02780
INSPECT AN/TSC-107 (TELEPHONE SWITCHBOARD), SB-3614
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): LWC 5 CISG 31W2-2TT-22 AND T.O. 31R2-2TSC107-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
FIELD PHONE, DIAL/PULSE PHONE, DTMF (PUSH BUTTON PHONE), POWER SUPPLY, INSULATED WIRE, HANDTOOLS, CLEANING MATERIALS
REFERENCES:
LWC 5 CISG 31W2-2TT-22, T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: IN SHOP, ON BENCH, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0449 2.27 7.0 6.0 5.0 3.0 3.54 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A CHECK CIRCUIT CARD CONFIGURATION
A PERFORM OPERATIONAL CHECK OF CIRCUIT CARDS
A CLEAN CONTACTS, PINS, CONNECTORS, AND FRONT PANEL
OSR JOB INVENTORY TASK STATEMENTS:
4 I0449 A OPERATIONALLY CHECK AUTOMATIC SWITCHBOARDS

TASK #: 02790
INSPECT AN/TSC-107 (TELEPHONE TERMINATING SYSTEM), AN/FTA-28, STU-5A, AN/TSC-1
07 WESCOM
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 7, 28, 56, 168
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
EQUIPMENT:
TRANSMISSION TEST SET, COMMUNICATIONS TEST SET (3901), TA-312
FIELD PHONE, DIGITAL VOLTMETER, POWER SUPPLY, 10K OHM RESISTOR,
PATCH CORDS, HANDTOOLS, CLEANING MATERIALS, DIGITAL MULTIMETER,
FREQUENCY COUNTER
REFERENCES:
LWC 5 CISG WESCOM, LWC 5 CISG AUTOVON CIRCUIT
LWC 5 CISG AN/STU-5, LWC 5 CISG AN/FTA-28
T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: PMI, PRE/POST DEPLOYMENT INSPECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0389 3.53 13.0 13.0 13.0 7.0 4.18 7.0
304X4 I 0462 3.40 18.0 18.0 18.0 10.0 3.31 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A CHECK STRAPPING POSITIONS
A CHECK TRANSMIT AUDIO LEVEL
A PERFORM 20 HERTZ RING DOWN TEST
A CHECK SEND SIGNAL FREQUENCY
A CHECK AUTOVON CONTROL CIRCUITS
A CHECK TRANSMIT VOICE OPERATED KEYING SWITCH (VOX)
A CHECK RECEIVE VOICE OPERATED KEYING SWITCH TEST
A CHECK HYBRID RESISTORS
A CLEAN TELEPHONE TERMINATING SYSTEM
OSR JOB INVENTORY TASK STATEMENTS:
4 I0462 A OPERATIONALLY CHECK PHONE PATCH SYSTEMS
4 H0389 A OPERATIONALLY CHECK RADIO-TELEPHONE SYSTEMS

PART2C

TASK #: 02800

INSPECT AN/TSC-107 (ANTENNA COUPLERS), GCU-935, GCU-1935

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 4

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, NONE

HOW OFTEN: 7, 28, 56, 168

OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-4-497-1, T.O. 31R2-2URC-92-1, T.O. 31R2 2TSC107 1

TTT: 5

SME OPINION: 5

EQUIPMENT:

HF INDEPENDENT SIDEband SYSTEM, HF SINGLE SIDEband RECEIVER, HAND TOOLS
DUMMY LOADS, HF SINGLE SIDEband TRANSCEIVER, WIRE/CABLE, CLEANING MATERIALS

REFERENCES:

T.O. 31R2-4-497-1, T.O. 31R2-2URC-92-1, T.O. 31R2-2TSC107-1

CONDITIONS CUES:

COND: OUTSIDE SHELTER, POWER ON, SAFETY OBSERVER

CUE: PMI, PRE/POST DEPLOYMENT INSPECTION

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H 0383	5.95	60.0	63.0	60.0	35.0	4.19	18.0
304X4	H 0391	5.47	42.0	43.0	40.0	21.0	4.29	12.0

ACTIVITIES SKILL KNOWLEDGE:

A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE

A CONNECT CONTROL CABLE TO COUPLER

A CONNECT RF CABLE TO COUPLER

A TUNE LINEAR POWER AMPLIFIER (LPA)

A TUNE ANTENNA COUPLERS (GCU-935, GCU-1935)

A PERFORM OPERATION CHECK OF ANTENNA COUPLER

A CLEAN CONNECTORS OF THE ANTENNA COUPLER

OSR JOB INVENTORY TASK STATEMENTS:

4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

TASK #: 02810

TROUBLESHOOT AN/TSC-107 (HF TRANSCEIVER) URC-92

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: MONTHLY

OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2URC92-2

TTT: 3

SME OPINION: 5

EQUIPMENT:

OSCILLOSCOPE, THRULINE WATTMETER, DIGITAL MULTIMETER,
RF VOLTMETER, FREQUENCY COUNTER, DUMMY LOAD, SIGNAL GENERATOR,
HAND TOOLS, CAPACITOR TESTER, SOLDERING KIT

REFERENCES:

T.O. 31R2-2URC92-2

CONDITIONS CUES:

COND: IN SHOP, ON BENCH, POWER ON, SAFETY OBSERVER

CUE: LOW POWER OUTPUT, NO TRANSMIT, POOR SENSITIVITY

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H 0373	6.45	56.0	60.0	57.0	30.0	6.48	18.0
304X4	J 0497	5.97	41.0	43.0	39.0	21.0	6.38	12.0

ACTIVITIES SKILL KNOWLEDGE:

A FAULT ISOLATE AN/TSC-107 MALFUNCTION TO HF TRANSCEIVER

A ALIGN AND ADJUST FILTER MODULE

A ALIGN AND ADJUST SYNTHESIZER

A ALIGN RECEIVER/EXCITER

A FAULT ISOLATE MALFUNCTION TO HF TRANSCEIVER SUBASSEMBLIES

A REMOVE AND REPLACE CIRCUIT CARDS AND ASSOCIATED PARTS

A REMOVE AND REPLACE FILTER MODULES

A REMOVE AND REPLACE POWER AMPLIFIERS

A REMOVE AND REPLACE CRYSTALS

OSR JOB INVENTORY TASK STATEMENTS:

4 J0497 A ALIGN SIDE BAND EQUIPMENT

4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 02820
TROUBLESHOOT AN/TSC-107 (VHF TRANSCEIVER) AN/ARC-186
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: YEARLY
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-2ARC186-2, T.O. 12R2-2ARC186-4,
AND T.O. 31R2-2TSC107-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
THRULINE WATTMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER,
DB METER, DUMMY LOAD, SIGNAL GENERATOR, HAND TOOLS, SOLDERING
KIT
REFERENCES:
T.O. 12R2-2ARC186-2
T.O. 12R2-2ARC186-4
T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: LOW POWER OUTPUT, NO TRANSMIT, POOR SENSITIVITY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0379 6.55 49.0 47.0 41.0 23.0 6.39 12.0
304X4 H 0404 4.58 22.0 22.0 23.0 13.0 4.02 11.0
ACTIVITIES SKILL KNOWLEDGE:
K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO VHF TRANS-
CEIVER
K ISOLATE MALFUNCTION TO RACK ADAPTER (CA-218R)
K ISOLATE MALFUNCTION TO POWER SUPPLY
K ISOLATE MALFUNCTION TO AUDIO AMPLIFIER BOARD
A ALIGN/ADJUST AUDIO AMPLIFIER BOARD
K ISOLATE MALFUNCTION TO COMPONENT
A REMOVE/REPLACE TRANSCEIVER
A REMOVE/REPLACE CIRCUIT BOARDS
A REMOVE/REPLACE COMPONENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0379 K ISOLATE MALFUNCTIONS WITHIN VERY HIGH FREQUENCY (VHF)
EQUIPMENT

TASK #: 02830
TROUBLESHOOT AN/TSC-107 (UHF TRANSCEIVER) AN/ARC-164
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: YEARLY
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-2ARC164-2, T.O. 12R2-2ARC164-4,
AND T.O. 31R2-2TSC107-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
THRULINE WATTMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER,
DB METER, DUMMY LOAD, SIGNAL GENERATOR, HAND TOOLS,
SOLDERING KIT
REFERENCES:
T.O. 12R2-2ARC164-2, T.O. 12R2-2ARC164-4, T.O. 31R2-2TSC107-1
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: LOW POWER OUTPUT, NO TRANSMIT, POOR SENSITIVITY
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A FAULT ISOLATE AN/TSC-107 MALFUNCTION TO UHF TRANSCEIVER
- A ISOLATE MALFUNCTION TO RACK ADAPTER (CA-218R)
- K ISOLATE MALFUNCTION TO POWER SUPPLY
- K ISOLATE MALFUNCTION TO AUDIO AMPLIFIER BOARD
- A ALIGN/ADJUST AUDIO AMPLIFIER BOARD
- K ISOLATE MALFUNCTION TO COMPONENT
- A REMOVE/REPLACE TRANSCEIVER
- A REMOVE/REPLACE CIRCUIT BOARDS
- A REMOVE/REPLACE COMPONENT

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS
- 4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT

TASK #: 02840

TROUBLESHOOT AN/TSC-107 (HF INDEPENDENT SIDEBAND TRANSMITTER) GSE-924, GSL-190
0A AND PS-1900

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): SEE REFERENCES

TTT: 3

SME OPINION: 5

EQUIPMENT:

THRULINE WATTMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER,
DB METER, DUMMY LOAD, VECTOR IMPEDANCE METER, RF VOLTMETER,
OSCILLOSCOPE, HAND TOOLS, SOLDERING KIT

REFERENCES:

- T.O. 31R2-4-494-1
- T.O. 31R2-4-494-4
- T.O. 31R2-4-496-1
- T.O. 31R2-4-496-4
- T.O. 31R2-4-1-121
- T.O. 31R2-2TSC107-1

CONDITIONS CUES:

COND: INSIDE SHELTER/ON BENCH, POWER ON, SAFETY OBSERVER

CUE: LOW POWER OUTPUT, NO TRANSMIT, OFF FREQUENCY, FAULT INDICATOR LIGHTS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0

ACTIVITIES SKILL KNOWLEDGE:

- K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO HF INDEPENDENT SINGLE SIDEBAND TRANSMITTER
- K ISOLATE MALFUNCTION TO EXCITER
- K ISOLATE MALFUNCTION TO LINEAR POWER AMPLIFIER
- K ISOLATE MALFUNCTION TO POWER SUPPLY
- A CHECK TRANSMIT POWER OUTPUT
- A CHECK LINEAR POWER AMPLIFIER FRONT PANEL METER READINGS
- A CHECK TRANSMIT POWER FROM EXCITER
- A ALIGN SYNTHESIZER
- A ALIGN EXCITER
- A ALIGN FILTER
- A CHECK OUTPUT FROM HIGH STABILITY OSCILLATOR
- A CHECK VOLTAGES FROM POWER SUPPLY
- A ADJUST REMOTE AUDIO CONTROL
- A INPUT VOLTAGE TO HIGH VOLTAGE POWER SUPPLY
- A CHECK OUTPUT FROM HIGH VOLTAGE POWER SUPPLY
- A CHECK PRE-POSITION ALIGNMENTS OF LINEAR POWER AMPLIFIER
- A ALIGN CIRCUIT CARDS
- A REPLACE DEFECTIVE COMPONENTS
- A CHECK MECHANICAL ASSEMBLIES

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS
- 4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT
- 4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 02850
TROUBLESHOOT AN/TSC-107 (HF INDEPENDENT SIDEBAND RECEIVER) GSR-920
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2TSC107-1, T.O. 31R2-4-495-1,
AND T.O. 31R2-4-495-4
TTT: 3
SME OPINION: 3
EQUIPMENT:
OSCILLOSCOPE, DIGITAL MULTIMETER, FREQUENCY COUNTER, SIGNAL
GENERATOR, DB METER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-2TSC107-1
T.O. 31R2-4-495-1
T.O. 31R2-4-495-4
CONDITIONS CUES:
COND: INSIDE SHELTER OR IN SHOP, ON BENCH, POWER ON, SAFETY
OBSERVER
CUE: POOR RECEIVE SENSITIVITY, OFF FREQUENCY, NO RECEIVE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 G 0299 2.38 11.0 12.0 11.0 5.0 4.88 7.0
304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0
ACTIVITIES SKILL KNOWLEDGE:
K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO HF INDEPENDENT
SIDEband (ISB) RECEIVER
K FAULT ISOLATE MALFUNCTION TO ISB RECEIVER SUBASSEM-
BLIES
A CHECK CIRCUIT CARDS
A REPLACE DEFECTIVE CIRCUIT CARDS
A REMOVE AND REPLACE RECEIVER
A ALIGN AND ADJUST SYNTHESIZER
A ALIGN RECEIVER
A ALIGN PRESELECTOR
OSR JOB INVENTORY TASK STATEMENTS:
4 G0299 A INSTALL MULTIPLE CHANNEL HF RECEIVERS
4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS

TASK #: 02860
TROUBLESHOOT AN/TSC-107 (MODEMS) MD-674, MD-1142, 1290VFT, MD-1061, MPC-1000T
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE, DIGITAL MULTIMETER, FREQUENCY COUNTER, DB METER,
AN/UGC-129 (TELETYPE), AN/GGM-21A (TELETYPE TEST SET),
HAND TOOLS, SIGNAL GENERATOR, SPECTRUM ANALYZER,
SOLDERING KIT
REFERENCES:
T.O. 31W1-4-260-1
T.O. 31W1-4-260-4
T.O. 31W2-2G-41
T.O. 31W2-2G-54-1
T.O. 31W2-2G-54-2
T.O. 31W2-2USC-1
T.O. 31W2-4-357-1
T.O. 31S1-4-234-1
CONDITIONS CUES:
COND: INSIDE SHELTER OR IN SHOP, ON BENCH, POWER ON, SAFETY
OBSERVER
CUE: ERRATIC DATA TRANSMISSION, NO DATA RECEIVED
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 I 0427 2.60 7.0 8.0 9.0 5.0 5.61 7.0
 304X4 I 0478 1.85 4.0 5.0 6.0 3.0 3.82 2.0
 304X4 K 0564 2.42 7.0 7.0 7.0 4.0 5.62 7.0

ACTIVITIES SKILL KNOWLEDGE:

- K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO MODEM
- A CHECK FREQUENCY OUTPUTS
- A CHECK AUDIO LEVEL OUTPUTS
- A CHECK CIRCUIT CARDS
- A REPLACE DEFECTIVE CIRCUIT CARDS
- A ALIGN AND ADJUST MODEM

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0478 A REMOVE OR INSTALL FREQUENCY SHIFT CONVERTER LRU
- 4 K0564 A ALIGN TONE KEYER AND CONVERTER PARTS
- 4 I0427 K ISOLATE MALFUNCTIONS WITHIN FREQUENCY SHIFT CONVERTERS TO LRU

TASK #: 02870

TROUBLESHOOT AN/TSC-107 (TELETYPEWRITTER) AN/UGC-29(V)1,MTUT-734

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, NONE, NONE

HOW OFTEN: QUARTERLY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31W4-2UGC129-31, T.O. 31W4-2UGC129-34,
AND T.O. 31W4-2UGC129-41

TTT: 5

SME OPINION: 3

EQUIPMENT:

DIGITAL MULTIMETER, BLANK MAGNETIC TAPE, HANDTOOLS,
SOLDERING KIT

REFERENCES:

T.O. 31W4-2UGC129-31

T.O. 31W4-2UGC129-34

T.O. 31W4-2UGC129-41

CONDITIONS CUES:

COND: INSIDE SHELTER OR IN SHOP, ON BENCH, POWER ON, SAFETY
OBSERVER

CUE: GARBLED MESSAGES, NO RECEIVE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 I 0474 1.78 1.0 3.0 2.0 1.0 4.19 2.0
 304X4 K 0592 2.20 2.0 2.0 2.0 1.0 5.47 7.0
 304X4 M 0625 3.08 19.0 20.0 19.0 11.0 4.37 7.0

ACTIVITIES SKILL KNOWLEDGE:

- K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO TELETYPEWRITER
- K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO MAGNETIC TAPE UNIT
- A PERFORM BITE TEST
- A CHECK CIRCUIT CARDS
- A REPLACE DEFECTIVE CIRCUIT CARDS
- A REMOVE AND REPLACE MAGNETIC TAPE UNIT
- A REMOVE AND REPLACE TELETYPEWRITTER UNIT
- A CHECK INTERCONNECT CABLES

OSR JOB INVENTORY TASK STATEMENTS:

- 4 M0625 A INSTALL VEHICLE MOUNTED GROUND RADIO COMMUNICATIONS EQUIPMENT (GRCE)
- 4 K0592 A REMOVE OR INSTALL DATA LINK SYSTEM DISCRETE PARTS
- 4 I0474 A REMOVE OR INSTALL DATA LINK SYSTEM LRU

TASK #: 02880
TROUBLESHOOT AN/TSC-107 (TELEPHONE SWITCHBOARD) SB-3614
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-2TT-21, T.O. 31W2-2TT-22, T.O. 31W2-2TT-24
TTT: 5
SME OPINION: 3
EQUIPMENT:
PUSH BUTTON PHONE, FIELD PHONE, DIGITAL MULTIMETER, HAND TOOLS,
WIRING
REFERENCES:
T.O. 31W2-2TT-21, T.O. 31W2-2TT-22, T.O. 31W2-2TT-24
CONDITIONS CUES:
COND: IN SHOP, ON BENCH, POWER ON, SAFETY OBSERVER
CUE: NO RING, FAILURE TO OPERATE, WILL NOT HOLD PROGRAMMING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0419 2.70 7.0 5.0 5.0 2.0 6.65 7.0
304X4 I 0469 1.87 3.0 3.0 3.0 2.0 4.37 2.0
ACTIVITIES SKILL KNOWLEDGE:
K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO TELEPHONE SWITCHBOARD
K FAULT ISOLATE MALFUNCTION TO CIRCUIT CARDS
A REPLACE DEFECTIVE CIRCUIT CARDS
A PERFORM OPERATIONAL CHECK .
OSR JOB INVENTORY TASK STATEMENTS:
4 I0469 A REMOVE OR INSTALL AUTOMATIC SWITCHBOARD COMPONENTS
4 I0419 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC SWITCHBOARDS

TASK #: 02890
TROUBLESHOOT AN/TSC-107 (TELEPHONE TERMINATING SYSTEMS) AN/FTA-28, STU-5A, AN/
TSC-107 WESCOM
DUTY CODE: X4
TASK STATUS: 7-CJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL VOLTMETER, FIELD PHONE, PATCH PANEL, PATCH CORDS,
HANDTOOLS, TRANSMISSION TEST SET, SOLDERING KIT
REFERENCES:
T.O. 31W1-2FTA28-1, T.O. 31W2-4-333-1, T.O. 31R2-2TSC107-1
WESCOM 401-00, WESCOM 417, WESCOM 443-00/01, WESCOM 4201/03, WESCOM 4522/00
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER
CUE: NO POWER, NO TRANSMIT OR RECEIVE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0417 3.35 8.0 8.0 6.0 2.0 5.85 7.0
304X4 J 0495 3.58 10.0 12.0 12.0 6.0 5.74 7.0
304X4 J 0539 2.67 10.0 10.0 11.0 5.0 4.92 7.0
ACTIVITIES SKILL KNOWLEDGE:
K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO TELEPHONE TERMINATING SYSTEM
A CHECK STRAPPING OPTIONS
A CHECK OUTPUT LEVELS
A CHECK SIGNALING FREQUENCIES
A ALIGN CIRCUIT CARDS
A REPLACE DEFECTIVE CIRCUIT CARDS
A REPLACE TELEPHONE TERMINATING SET
OSR JOB INVENTORY TASK STATEMENTS:
4 I0417 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC KEYING SYSTEMS
TO LINE REPLACEABLE UNITS (LRU)
4 J0539 A REMOVE OR INSTALL RADIO-TELEPHONE EQUIPMENT PARTS
4 J0495 A ALIGN RADIO-TELEPHONE EQUIPMENT
4 I0417 K ISOLATE MALFUNCTIONS WITHIN AUTOMATIC KEYING SYSTEMS
TO LINE REPLACEABLE UNITS (LRU)

TASK #: 02900
TROUBLESHOOT AN/TSC-107 (ANTENNA COUPLER) GCU-935, GCU-1935

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: QUARTERLY

OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): SEE REFERENCES

TTT: 3

SME OPINION: 5

EQUIPMENT:

DUMMY LOAD, THRULINE WATTMETER, HF TRANSMITTER, DIGITAL MULTIMETER, RF VOLTMETER, HAND TOOLS, SOLDERING KIT

REFERENCES:

T.O. 31R2-2URC92-1, T.O. 31R2-2URC92-2, T.O. 31R2-2URC92-4

T.O. 31R2-4-497-1, T.O. 31R2-4-497-4

CONDITIONS CUES:

COND: OUTSIDE SHELTER, POWER ON, SAFETY OBSERVER

CUE: HIGH REFLECTED POWER TO TRANSMITTER

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	I	0431	2.85	12.0	15.0	15.0	8.0	5.26
304X4	M	0617	2.65	18.0	22.0	21.0	13.0	4.57
								7.0

ACTIVITIES SKILL KNOWLEDGE:

K FAULT ISOLATE AN/TSC-107 MALFUNCTION TO ANTENNA COUPLERS

A CHECK FORWARD POWER OUTPUT

A CHECK REFLECTED POWER

A CHECK INTERCONNECTING CABLES

A CHECK ANTENNA COUPLER SUBASSEMBLIES

A REPLACE DEFECTIVE ANTENNA SUBASSEMBLIES

OSR JOB INVENTORY TASK STATEMENTS:

4 M0617 A ADJUST MOBILE ANTENNA SYSTEMS

4 I0431 K ISOLATE MALFUNCTIONS WITHIN MOBILE ANTENNA SYSTEMS TO LRU

TASK #: 02910

TROUBLESHOOT AN/TSC-107 SYSTEM TO IDENTIFY DEFECTIVE MAJOR SUBSYSTEMS

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: DAILY

OJT TRAINABLE: YES, NO, REQUIRES BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2TSC107-1

TTT: 3

SME OPINION: 3

EQUIPMENT:

DUMMY LOAD, THRULINE WATTMETER, RF SIGNAL GENERATOR, FREQUENCY COUNTER, TRANSMISSION TEST SET, COMMUNICATIONS TEST SET, TELETYPE TEST SET, OSCILLOSCOPE, AN/PSM-2A (MEGOMETER), RF VOLTMETER, TELEPHONES, BLANK MAGNETIC TAPE, DIGITAL MULTIMETER, HAND TOOLS, COAXIAL CABLES, SOLDERING KIT

REFERENCES:

T.O. 31R2-2TSC107-1

CONDITIONS CUES:

COND: INSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER

CUE: OPERATOR COMPLAINT, FAILURE TO COMMUNICATE WITH DISTANT STATIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H	0399	3.92	20.0	19.0	18.0	11.0	4.08
304X4	H	0403	2.45	4.0	6.0	8.0	4.0	4.18
304X4	M	0636	1.65	11.0	12.0	11.0	6.0	4.09
								2.0

ACTIVITIES SKILL KNOWLEDGE:

K FAULT ISOLATE SYSTEM BY SUBSTITUTION METHOD

K FAULT ISOLATE DEFECTIVE SUBSYSTEM TO MAJOR COMPONENT

A REMOVE AND REPLACE DEFECTIVE SUBSYSTEM

A PERFORM OPERATIONAL CHECK OF REPAIRED SUBSYSTEM

OSR JOB INVENTORY TASK STATEMENTS:

4 M0636 A REMOVE OR INSTALL LRU OF MOBILE ANTENNA SYSTEMS

4 H0399 A REMOVE OR INSTALL MULTIPLE CHANNEL SYSTEM LRU

4 H0403 A REMOVE OR INSTALL RADIO-TELETYPE SYSTEM LRU

TASK #: 02920
 SET UP/TEAR DOWN AN/TSC-107 SYSTEM
 DUTY CODE: X4
 TASK STATUS: 3-OJT
 TIMES ANALYZED: 2
 TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: QUARTERLY
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31R2-2TSC107-1
 TTT: 3
 SME OPINION: 3
EQUIPMENT:
 HAND TOOLS, M889 SUPPORT VEHICLE, MJQ18 GENERATOR (POWER SUPPLY)
 M889 CARRIES ANTENNAS, SAFETY EQUIPMENT, GROUND RODS, DRIVERS,
 CABLES, TOOLS, ENVIRONMENTAL CONTROL UNITS (AIR CONDITIONING)
REFERENCES:
 T.O. 31R2-2TSC107-1
CONDITIONS CUES:
 COND: FILED SITE, POWER OFF, SAFETY OBSERVER
 CUE: MISSION DIRECTED, DEPLOYMENT EXERCISES
JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK YE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 G 0285 1.87 10.0 11.0 10.0 5.0 3.74 2.0
 304X4 M 0F21 2.80 25.0 28.0 26.0 15.0 4.63 7.0
 304X4 M 0622 2.92 19.0 23.0 23.0 12.0 3.59 7.0
ACTIVITIES SKILL KNOWLEDGE:
 A PREPOSITION EQUIPMENT
 A DETERMINE TRANSMIT PATH REQUIREMENTS
 A INSTALL GROUND SYSTEM A CHECK GROUNDING
 A INSTALL ENVIRONMENTAL CONDITIONING UNITS (ECU)
 A INSTALL GENERATORS (MJQ18)
 A INSTALL HF SINGLE SIDEBAND SYSTEM
 A INSTALL ANTENNAS
 A PERFORM OPERATIONAL CHECK OF TELETYPE, MODEMS, AND RADIO SYSTEMS
 A INSTALL TELEPHONE SYSTEM
 A PERFORM OPERATIONAL CHECK OF TELEPHONE SYSTEM
 A PACK EQUIPMENT ONTO PALLETS WHEN DEPLOYMENT IS TERMINATED
 S USE DRIVERS
 S USE CABLES
 S USE ENVIRONMENTAL CONTROL UNITS (AIR CONDITIONING)
OSR JOB INVENTORY TASK STATEMENTS:
 4 G0285 A INSTALL FIELD TELEPHONE SYSTEMS
 4 H0621 A INSTALL MOBILE ANTENNA SYSTEMS
 4 H0622 A INSTALL STATION GROUNDS ON VANS OR SHELTERS

TASK #: 02930
 INSPECT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (407L/485L)
 DUTY CODE: X4
 TASK STATUS: 3-OJT
 TIMES ANALYZED: 2
 TNOTES:
 CONSEQUENCES: MINOR, NONE, NONE
 HOW OFTEN: 7, 14, 28, 56, 84, 168
 OJT TRAINABLE: YES, BASIC ELECTRONICS
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): SEE REFERENCES
 TTT: 5
 SME OPINION: 5
EQUIPMENT:
 TRANSMISSION TEST SET, RADIO FREQUENCY (RF) SIGNAL GENERATOR,
 FREQUENCY COUNTER, BUILT-IN TEST EQUIPMENT IN POWER AMPLIFIER,
 TELEGRAPH SIGNAL ANALYZER, EXTENDER CARDS, OSCILLOSCOPE,
 RF MILLIVOLTMETER, DIGITAL MULTIMETER, PATCH CORDS, TEST
 CONNECTORS, CLEANING AND LUBRICATING MATERIALS, HAND TOOLS,
 REFLECTOMETER, ANALOG MULTIMETER
REFERENCES:
 T.O. 31S1-2TSC60-196WC-1, T.O. 31S1-2TSC60-236WC-1
 T.O. 31S1-2TSC60-246WC-1, T.O. 31S1-2TSC60-191
 Y.O. 31S1-2TSC60-201, T.O. 31S1-2TSC60-211, T.O. 31S1-2TSC60-223
 T.O. 31S1-2TSC60-231, T.O. 31S1-2TSC60-241, T.O. 31S1-2TSC60-253
 T.O. 31S1-2TSC60-261, T.O. 31S1-2TSC60-271, T.O. 31S1-2TSC60-273
CONDITIONS CUES:
 COND: INSIDE EQUIPMENT SHELTER (COMPACT SPACE), POWER ON, SAFETY
 OBSERVER
 CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0382 4.82 22.0 26.0 26.0 17.0 4.07 11.0
304X4 H 0389 3.53 13.0 13.0 13.0 7.0 4.18 7.0
304X4 J 0496 2.95 7.0 9.0 10.0 4.0 5.77 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CHECK DC VOLTAGE
- A CHECK AC VOLTAGE
- A CHECK SIGNAL LEVELS
- A CHECK CONTROLS AND INDICATORS
- A ALIGN ASSOCIATED EQUIPMENT (POWER AMPLIFIERS, RECEIVERS, EXCITERS, TELETYPE UNIT)
- A CLEAN AND LUBRICATE MOTORS, GEARS, AIR FILTERS AND BEARINGS
- A ALIGN ANTENNAS
- A MEASURE TRANSMISSION POWER

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0382 A OPERATIONALLY CHECK FM EQUIPMENT
- 4 H0389 A OPERATIONALLY CHECK RADIO-TELEPHONE SYSTEMS
- 4 J0496 A ALIGN RADIO-TELETYPE EQUIPMENT

TASK #: 02940

TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (407L/485L)

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: MINOR, NONE, NONE

HOW OFTEN: QUARTERLY

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31S1-2TSC60-191; T.O. 31S1-2TSC60-32,
AND T.O. CEMI-1300-1

TTT: 5

SME OPINION: 5

EQUIPMENT:

DIGITAL MULTIMETER, RF WATTMETER, AUDIO OSCILLATOR, FREQUENCY COUNTER, BUILT-IN CONTROL MONITOR (SPEAKERS), HAND TOOLS
ANALOG MULTIMETER, SIGNAL GENERATOR, REFLECTOMETER

REFERENCES:

- T.O. 31S1-2TSC60-191
- T.O. 31S1-2TSC60-32
- T.O. CEMI-1300-1

CONDITIONS CUES:

COND: INSIDE/OUTSIDE EQUIPMENT SHELTER, POWER ON, SAFETY OBSERVER

CUE: OPERATOR COMPLAINT, HIGH DATA ERROR RATES

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0422 2.78 5.0 5.0 4.0 2.0 5.73 7.0
304X4 I 0423 4.62 22.0 24.0 22.0 12.0 5.29 11.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR SIGNS OF OBVIOUS DEFECTS
- A CHECK POWER SOURCE
- A CHECK MINIMUM PERFORMANCE STANDARD OF RECEIVER
- A CHECK REFLECTED POWER FROM TRANSMIT ANTENNA
- A CHECK ANTENNA POSITIONING
- A CHECK MINIMUM PERFORMANCE STANDARDS OF TRANSMITTER
- A CHECK MINIMUM PERFORMANCE STANDARD OF POWER AMPLIFIER
- A CHECK RESISTANCE/CONTINUITY OF PATCH PANEL JACKS
- A CHECK FREQUENCIES OF TELETYPE CHANNELS
- A CHECK SIGNAL LEVELS IN AND OUT OF TELETYPE CHANNELS
- A CHECK TRANSMISSION LINES
- A CHECK VAN INTERCONNECTS

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0422 K ISOLATE MALFUNCTIONS WITHIN BROADCASTING SYSTEMS TO LRU
- 4 I0423 K ISOLATE MALFUNCTIONS WITHIN COMMUNICATIONS PATCH PANELS TO LRU

TASK #: 02950
TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (RECEIVER) HF 8054
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, BASIC ELECTRONICS, DIGITAL TECHNIQUES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S1-2TSC60-191 ANJ T.O. 31S1-2TSC60-201
TTI: 7
SME OPINION: 5
EQUIPMENT:
TRANSMISSION TEST SET, RF SIGNAL GENERATOR, OSCILLOSCOPE,
DIGITAL VOLTMETER, RF VOLTMETER, ATTENUATOR, HAND TOOLS,
CLEANING MATERIALS, ANALOG MULTIMETER, DIGITAL LOGIC PROBE,
FREQUENCY COUNTER
REFERENCES:
T.O. 31S1-2TSC60-191
T.O. 31S1-2TSC60-201
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER (COMPACT SPACE)
CUE: ABNORMAL SIGNAL LEVELS, FAULT LIGHT INDICATORS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 50.0 57.0 30.0 6.48 18.0
304X4 H 0396 4.78 29.0 31.0 34.0 22.0 3.82 12.0
ACTIVITIES SKILL KNOWLEDGE:
K FAULT ISOLATE MALFUNCTION TO RECEIVER
A CHECK FAULT INDICATORS
A INSPECT VISUALLY FOR SIGNS OF OBVIOUS DAMAGE
A INPUT FREQUENCIES TO RECEIVER FROM SIGNAL GENERATOR
A CHECK SIGNAL LEVELS
A CHECK SIGNAL AND INJECTION FREQUENCIES
A CHECK CONNECTORS
A CHECK CIRCUIT CARD SEATING
A REPLACE FAULTY CARD(S)
A OPERATIONALLY CHECK RECEIVER
A ALIGN SIGNAL LEVELS
A ALIGN SIGNAL FREQUENCIES
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 H0396 A REMOVE OR INSTALL HF SYSTEM LRU

TASK #: 02960
TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (EXCITER) HF 8014
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, DIGITAL TECHNIQUES
ELECTROSTATIC CONTROL
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S1-2TSC60-191 AND T.O. 31S1-2TSC60-211
TTI: 5
SME OPINION: 5
EQUIPMENT:
TRANSMISSION TEST SET, RF VOLTMETER, ATTENUATORS, DC POWER
SUPPLY, FREQUENCY COUNTER, DIGITAL VOLTMETER, OSCILLOSCOPE
CLEANING MATERIALS, HAND TOOLS, ANALOG MULTIMETER,
DIGITAL LOGIC PROBE, REFLECTOMETER, SIGNAL GENERATOR
REFERENCES:
T.O. 31S1-2TSC60-191
T.O. 31S1-2TSC60-211
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER
CUE: NO TRANSMIT, LOW POWER OUTPUT, FAULT INDICATORS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
 304X4 H 0396 4.78 29.0 31.0 34.0 22.0 3.82 12.0
 304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0

ACTIVITIES SKILL KNOWLEDGE:
 K FAULT ISOLATE MALFUNCTION TO EXCITER
 A INSPECT VISUALLY FOR SIGNS OF OBVIOUS DAMAGE
 A INJECT FREQUENCIES INTO EXCITER FROM FREQUENCY GENERATOR
 A CHECK SIGNAL LEVELS
 A CHECK SIGNAL AND INJECTION FREQUENCIES
 A CHECK CONNECTORS
 A CHECK CARD SEATING
 A ISOLATE MALFUNCTION TO FAULTY CARD(S)
 A REPLACE FAULTY CARD(S)
 A ALIGN SIGNAL LEVELS
 A ALIGN SIGNAL FREQUENCIES

OSR JOB INVENTORY TASK STATEMENTS:
 4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT
 4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS
 4 H0396 A REMOVE OR INSTALL HF SYSTEM LRU

TASK #: 02970
 TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (POWER AMPLIFIER) HF 8021, H
 F 8022
 DUTY CODE: X4
 TASK STATUS: 3-KP
 TIMES ANALYZED: 2

TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: MONTHLY
 OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, DIGITAL TECHNIQUES
 ESD, ELECTROMECHANICAL OPERATION THEORY AND
 SAFETY PRECAUTIONS

QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31S1-2TSC60-191, T.O. 31S1-2TSC60-231,
 AND T.O. 31S1-2TSC60-261

TTT: 5
 SME OPINION: 5

EQUIPMENT:
 RF SIGNAL GENERATOR, DIGITAL VOLTMETER, VECTOR IMPEDANCE METER,
 RF VOLTMETER, OSCILLOSCOPE, SPECTRUM ANALYZER, BUILT IN TEST SET
 DUMMY LOAD, HAND TOOLS, CLEANING MATERIALS, ANALOG MULTIMETER,
 DIGITAL LOGIC PROBE, FIELD STRENGTH TESTER, FREQUENCY COUNTER,
 REFLECTOMETER, SOLDERING KIT

REFERENCES:
 T.O. 31S1-2TSC60-191, T.O. 31S1-2TSC60-231, T.O. 31S1-2TSC60-261

CONDITIONS CUES:
 COND: INSIDE EQUIPMENT SHELTER
 CUE: LOW POWER OUTPUT, FAILURE TO TUNE, HIGH REFLECTED POWER,
 FAULT INDICATORS

JOB STANDARDS:
 IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
 304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0
 304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0

ACTIVITIES SKILL KNOWLEDGE:
 K FAULT ISOLATE MALFUNCTION TO POWER AMPLIFIER
 A INSPECT VISUALLY SIGNS FOR OBVIOUS DAMAGE
 A CHECK INPUT SIGNALS TO POWER AMPLIFIER
 A CHECK SERVO SYSTEM ALIGNMENTS
 A CHECK COURSE TUNE POSITIONING
 A CHECK FINE TUNE POSITIONING
 A CHECK DC VOLTAGE LEVELS
 A CHECK AC VOLTAGE LEVELS
 A CHECK SIGNAL LEVELS
 A CHECK CONTROL VOLTAGES
 A CHECK CONNECTORS
 A CHECK CARD SEATS
 A SIGNAL TRACE TO FAULTY COMPONENT, MODULE, OR CARD
 A REPLACE DEFECTIVE COMPONENT, MODULE, OR CARD
 A ALIGN SERVO SYSTEMS
 A SET CONTROL VOLTAGES
 A PERFORM POWER AMPLIFIER NEUTRALIZATION ALIGNMENTS
 A PERFORM OPERATIONAL CHECK OF SYSTEM

OSR JOB INVENTORY TASK STATEMENTS:
 4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF) EQUIPMENT
 4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS
 4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS

TASK #: 02980
TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (TELETYPE/SPEECH PLUS) UCC-3
A(V)1, 3
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: BIANNUAL
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
EQUIPMENT:
TRANSMISSION TEST SET, TELETYPEWRITER TEST SET, OSCILLOSCOPE,
DIGITAL MULTIMETER, CLEANING MATERIALS, HAND TOOLS, ANALOG
MULTIMETER, FREQUENCY COUNTER
REFERENCES:
T.O. 31S1-2TSC60-191
T.O. 31W2-4-194-2
T.O. 31W2-4-195-2
T.O. 31W2-4-196-2
T.O. 31W2-4-197-2
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER
CUE: GARBLED MESSAGE TRAFFIC RECEIVED
JOB STANDARDS:
IAW REFERENCES
OSR DATA:

	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	I	0434	2.97	2.0	3.0	5.0	3.0	5.93
304X4	I	0478	1.85	4.0	5.0	6.0	3.0	3.82
304X4	I	0482	2.03	7.0	9.0	9.0	5.0	3.82

ACTIVITIES SKILL KNOWLEDGE:
K FAULT ISOLATE MALFUNCTION TO TELETYPE CARD
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DAMAGE
A CHECK OUTPUT FREQUENCY
A CHECK OUTPUT LEVEL
A CHECK INPUT FREQUENCY
A CHECK INPUT LEVEL
A CHECK CONNECTORS
A INPUT SIGNAL THROUGH CARDS
A TRACE SIGNAL THROUGH CARDS
A REPLACE FAULTY CARD(S)
A ALIGN FREQUENCY
A ADJUST OUTPUT LEVELS
A PERFORM OPERATIONAL CHECK
OSR JOB INVENTORY TASK STATEMENTS:
4 I0434 K ISOLATE MALFUNCTIONS WITHIN SIGNAL CONDITIONING OR
SHAPING EQUIPMENT TO LRU
4 I0478 A REMOVE OR INSTALL FREQUENCY SHIFT CONVERTER LRU
4 I0482 A REMOVE OR INSTALL PHONE PATCH EQUIPMENT LRU

TASK #: 02990
TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (SIGNAL CONVERTER) STU-2A
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: BIANNUAL
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W1-2TSC60-2, T.O. 31S1-2TSC60-191,
AND T.O. 31S1-2TSC60-193
TTT: 5
SME OPINION: 5
EQUIPMENT:
TRANSMISSION TEST SET, TELETYPEWRITER TEST SET, OSCILLOSCOPE
DIGITAL MULTIMETER, CLEANING MATERIALS, HANDTOOLS, ANALOG
MULTIMETER, FREQUENCY COUNTER
REFERENCES:
T.O. 31W1-2TSC60-2, T.O. 31S1-2TSC60-191, T.O. 31S1-2TSC60-193
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER
CUE: NO RING DOWN CAPABILITIES
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 I 0427 2.60 7.0 8.0 9.0 5.0 5.61 7.0
 304X4 I 0435 2.18 1.0 1.0 1.0 1.0 5.78 7.0
 304X4 I 0478 1.85 4.0 5.0 6.0 3.0 3.82 2.0

ACTIVITIES SKILL KNOWLEDGE:

- A FAULT ISOLATE MALFUNCTION TO SIGNAL CONVERTER UNITS
- A INSPECT VISUALLY EQUIPMENT FOR SIGNS OF DAMAGE
- A CHECK OUTPUT FREQUENCY
- A CHECK OUTPUT LEVEL
- A CHECK INPUT FREQUENCY
- A CHECK INPUT LEVEL
- A CHECK CONNECTORS
- A INPUT SIGNAL THROUGH CARDS
- A TRACE SIGNAL THROUGH CARDS
- A REPLACE FAULTY CARD(S)
- A ALIGN FREQUENCY
- A ADJUST OUTPUT LEVELS
- A PERFORM OPERATIONAL CHECK

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0427 K ISOLATE MALFUNCTIONS WITHIN FREQUENCY SHIFT CONVERTERS TO LRU
- 4 I0435 K ISOLATE MALFUNCTIONS WITHIN SIGNAL SHIFTERS TO LRU
- 4 I0478 A REMOVE OR INSTALL FREQUENCY SHIFT CONVERTER LRU

TASK #: 03000

TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL (ANTENNA SYSTEMS) OE-85, OE-86, AS-2481 AND AS-2482

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: QUARTERLY

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND ANTENNA OPERATION

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31S1-2TSC60-191, T.O. 31S1-2TSC60-32,
AND T.O. AFCC-CEMI-1300-1

TTT: 5

SME OPINION: 3

EQUIPMENT:

INSULATION TEST SET, DIGITAL VOLTmeter, ANTENNA TEST SET,
OSCILLOSCOPE, WATTMETER, HAND TOOLS, ANALOG MULTIMETER,
FIELD STRENGTH TESTER

REFERENCES:

T.O. 31S1-2TSC60-191
T.O. 31S1-2TSC60-32
T.O. AFCC-CEMI-1300-1

CONDITIONS CUES:

COND: OPEN FIELD

CUE: HIGH REFLECTED POWER, INTERLOCK FAULT, LACK OR RECEIVED
SIGNAL

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 L 0614 2.20 17.0 17.0 16.0 8.0 3.60 7.0
 304X4 M 0636 1.65 11.0 12.0 11.0 6.0 4.09 2.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT FOR OBVIOUS DEFECTS TO INCLUDE
LOOSE GUY WIRES
- K ISOLATE FAULTY ANTENNA PARTS
- A CHECK ANTENNA AND CABLE IMPEDANCE
- A REPAIR OR REPLACE TERMINATING RESISTORS, BALUN,
INSULATORS, COUPLING UNITS, AND CABLE WHEN DEFECTIVE

OSR JOB INVENTORY TASK STATEMENTS:

- 4 L0614 A REMOVE OR INSTALL DUMMY LOAD ANTENNA PARTS
- 4 M0636 A REMOVE OR INSTALL LRU OF MOBILE ANTENNA SYSTEMS

TASK #: 03010
TROUBLESHOOT AN/TSC-60(V)5 COMMUNICATIONS CENTRAL PATCH PANEL
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: YEARLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS AND SYSTEM
CONFIGURATION RELATIONSHIPS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S1-2TSC60-181 AND T.O. 31S1-2TSC60-191
TTT: 5
SME OPINION: 3
EQUIPMENT:
SIGNAL GENERATOR, STEP ATTENUATOR, TRANSMISSION TEST SET,
DIGITAL VOLTMETER, DB METER, TERMINATION PLUGS, CLEANING
MATERIALS, HAND TOOLS, ANALOG MULTIMETER, SOLDERING KIT,
FREQUENCY COUNTER
REFERENCES:
T.O. 31S1-2TSC60-181
CONDITIONS CUES:
COND: INSIDE EQUIPMENT SHELTER
CUE: LOW SIGNAL LEVELS, POOR QUALITY PATCHES
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0423 4.62 22.0 24.0 22.0 12.0 5.29 11.0
304X4 K 0591 3.32 18.0 17.0 16.0 8.0 4.90 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK CONTINUITY OF PATCH PANEL
A CHECK CONTINUITY OF PATCH PANEL TO THE EQUIPMENT
A REPLACE FAULTY WIRING
A REPAIR POORLY SOLDERED JOINTS
A INPUT SIGNALS TO PATCH PANEL
A CHECK SIGNAL LEVELS AT ASSOCIATED EQUIPMENT (I.E.
RECEIVER, EXCITER, ETC)
A CLEAN CONTACTS WITHIN PATCH PANEL
OSR JOB INVENTORY TASK STATEMENTS:
4 I0423 K ISOLATE MALFUNCTIONS WITHIN COMMUNICATIONS PATCH PANELS TO LRU
4 K0591 A REMOVE OR INSTALL COMMUNICATION PATCH PANEL DISCRETE PARTS

TASK #: 03020
REPAIR CARDS ASSOCIATED WITH AN/TSC-60(V)5 COMMUNICATIONS CENTRAL SYSTEM
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO, ESD CONTROL, DIGITAL TECHNIQUES,
MICROMINIATURE AND HIGH RELIABILITY SOLDERING AND
BASIC ELECTRONIC REQUIRED
QTP ADEQUATE: NONE
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE, DIGITAL VOLTMETER, RF MILLIVOLTMETER, TRANSMISSION
TEST SET, RF SIGNAL GENERATOR, DIGITAL LOGIC-PROBE, DB METER, ESD
SOLDERING STATION, HAND TOOLS, CLEANING MATERIALS, ANALOG
MULTIMETER, FREQUENCY COUNTER
REFERENCES:
T.O. 31S1-2TSC60-32, T.O. 31S1-2TSC60-72, T.O. 31S1-2TSC60-92
T.O. 31S1-2TSC60-181, T.O. 31S1-2TSC60-191, T.O. 31S1-2TSC60-193
T.O. 31S1-2TSC60-201, T.O. 31S1-2TSC60-211, T.O. 31S1-2TSC60-241
T.O. 31S1-2TSC60-261, T.O. 31S1-2TSC60-271, T.O. 31S1-2TSC60-223
T.O. 31S1-2TSC60-231
CONDITIONS CUES:
COND: IN SHOP BENCH
CUE: TURN IN OF FAULTY CARDS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0532 6.65 30.0 35.0 37.0 20.0 6.33 12.0
304X4 K 0598 2.18 4.0 3.0 4.0 2.0 5.12 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT VISUALLY CARD FOR SIGNS OF DAMAGE
- A CHECK SEMICONDUCTORS
- A CHECK RESISTORS
- A CHECK CAPACITORS
- A CHECK TRANSFORMERS
- A CHECK INTEGRATED CIRCUITS
- A CHECK TERMINAL CONNECTIONS
- A DESOLDER DEFECTIVE COMPONENTS
- A REPLACE DEFECTIVE COMPONENTS
- A CHECK POWER INPUTS FROM ASSOCIATED CIRCUITS
- A PLACE CARD IN EQUIPMENT FROM WHICH IT WAS TAKEN
- A CHECK INPUTS ON CIRCUIT CARD PINS
- A CHECK OUTPUT FROM CARD
- A TRACE SIGNAL USING SCHEMATIC TO FIND FAULT(S)
- A OPERATIONALLY CHECK CARD
- A REMOVE CARD
- A PLACE CARD BACK INTO SUPPLY SYSTEM

OSR JOB INVENTORY TASK STATEMENTS:

- 4 J0532 A PERFORM HIGH RELIABILITY SOLDERING OF INTEGRATED CIRCUITS
- 4 K0598 A REMOVE OR INSTALL MULTIPLEX EQUIPMENT DISCRETE PARTS

TASK #: 03030

OPERATE AN/TSC-60(V)5 COMMUNICATIONS CENTRAL

DUTY CODE: X4

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, NONE, NONE

HOW OFTEN: QUARTERLY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): AFCCR 28-1 VOL II, ACP 123, AND ACP 121

TTT: 3

SME OPINION: 3

EQUIPMENT:

NONE

REFERENCES:

AFCCR 28-1 VOL II

ACP 123

ACP 121

CONDITIONS CUES:

COND: INSIDE EQUIPMENT SHELTER

CUE: MISSION DIRECTED TO ESTABLISH AND MAINTAIN COMMUNICATIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0446 1.98 3.0 4.0 3.0 1.0 3.24 2.0

ACTIVITIES SKILL KNOWLEDGE:

- A SET EQUIPMENT TO OPERATING FREQUENCIES
- A ESTABLISH COMMUNICATIONS WITH DISTANT END
- A AUTHENTICATE WITH DISTANT END
- A MAINTAIN COMMUNICATIONS
- K RECALL OPERATION PROCEDURES
- K RECALL AUTHENTICATION PROCEDURES

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0446 A MONITOR DATA LINK SYSTEMS

TASK #: 03040
 SET UP/TEAR DOWN AN/TSC-60(V)5 COMMUNICATIONS CENTRAL SYSTEM
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: QUARTERLY
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31S1-2TSC60-32, T.O. 31S1-2TSC60-191,
 AND AFCC-CEMI-1300-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
 COMPASS, VIBRO-GROUND (GROUND CHECKER), HAND TOOLS, DIGITAL
 MULTIMETER, FIELD STRENGTH PROBE, REFLECTOMETER
REFERENCES:
 T.O. 31S1-2TSC60-32
 T.O. 31S1-2TSC60-191
 AFCC-CEMI-1300-1
CONDITIONS CUES:
 COND: OPEN FIELD (DEPLOYMENT SITE)
 CUE: MISSION DIRECTED
JOB STANDARDS:
 IAW REFERENCES

OSR DATA:	TASK	TE	IJOB	1ENL	5SKL	7SKL	TD	ATI
304X4	A 0005	.42	3.0	4.0	6.0	12.0	6.80	2.0
304X4	M 0621	2.80	25.0	28.0	26.0	15.0	4.63	7.0
304X4	M 0622	2.92	19.0	23.0	23.0	12.0	3.59	7.0

ACTIVITIES SKILL KNOWLEDGE:

- A SELECT SITE
- A SELECT LAYOUT FOR ANTENNA PLACEMENT
- A UNPACK EQUIPMENT PALLETS
- A POSITION EQUIPMENT (SHELTER)
- A INSTALL ANTENNAS
- A INSTALL GROUNDING SYSTEM
- A INSTALL POWER GENERATORS
- A CONNECT ENVIRONMENTAL CONTROL UNIT CABLES TO EQUIPMENT SHELTER
- A INTERCONNECT CABLES BETWEEN REMOTED EQUIPMENT SHELTERS (CRYPTO, TELETYPE, TECH CONTROL, ETC)
- A PERFORM OPERATIONAL CHECK OF SYSTEM
- A RECEIVE DIRECTION FOR DEACTIVATION OF DEPLOYMENT
- A DISASSEMBLE ALL CONNECTIONS
- A DISASSEMBLE POWER GENERATORS
- A DISASSEMBLE GROUNDING SYSTEM
- A DISASSEMBLE ANTENNAS
- A PACK EQUIPMENT PALLETS FOR MOBILITY
- A CHECK SYSTEM GROUNDING (IF REQUIRED)
- K USE COMPASS (TRANSIT)
- K PREPARE EQUIPMENT PALLETS FOR MOBILITY

OSR JOB INVENTORY TASK STATEMENTS:

- 4 A0005 A CONDUCT REQUIREMENTS SURVEYS FOR INSTALLATION OF MOBILE COMMUNICATIONS SYSTEMS
- 4 M0621 A INSTALL MOBILE ANTENNA SYSTEMS
- 4 M0622 A INSTALL STATION GROUNDS ON VANS OR SHELTERS

TASK #: 03050
 INSPECT AN/TSW-7 MOBILE CONTROL TOWER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: 168
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31R2-2TSW7-6WC
TTT: 5
SME OPINION: 5
EQUIPMENT:
 HAND TOOLS, SIGNAL GENERATOR, WATTMETER, DIGITAL VOLTMETER,
 CLEANING SUPPLIES
REFERENCES:
 T.O. 31R2-2TSW7-6WC
CONDITIONS CUES:
 COND: ON EQUIPMENT
 CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0450 3.07 18.0 20.0 19.0 12.0 3.26 7.0
304X4 I 0466 4.20 36.0 34.0 31.0 18.0 3.71 12.0

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CLEAN EQUIPMENT
- A CHECK INDICATOR LIGHTS
- A CHECK POWER SUPPLY OUTPUT VOLTAGE
- A CHECK RF CHANNELS
- A CHECK WEATHER EQUIPMENT
- A CHECK TELEPHONE SYSTEMS OPERATION
- A CHECK RECORDER REPRODUCER OPERATION
- A CHECK BATTERY CHARGER OUTPUT VOLTAGE

OSR JOB INVENTORY TASK STATEMENTS:

- 4 I0450 A OPERATIONALLY CHECK BATTERY CHARGERS
- 4 I0466 A PERFORM OPERATIONAL CHECKS OF AUDIO RECORDERS AND REPRODUCERS

TASK #: 03060

TROUBLESHOOT AN/TSH-7 MOBILE CONTROL TOWER

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: ? (AS REQUIRED)

OJT TRAINABLE: YES, NO, BASIC ELECTRONICS

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2TSW7-2, T.O. 31R2-2TSW7-3
AND T.O. 31R2-2TSW7-4

TTT: 5

SME OPINION: 5

THE AN/TSH-7 MOBILE CONTROL TOWER PROVIDES FIELD AIR TRAFFIC CONTROL CAPABILITY. IT IS COMPOSED OF THE FOLLOWING SUBASSEMBLIES WITH MAINTENANCE PERFORMED TO THE LEVEL INDICATED. TASK ANALYSIS ON SEVERAL OF THE SUBASSEMBLIES BELOW CAN BE FOUND LISTED UNDER THE INDIVIDUAL SUBASSEMBLY NAME.

LRU AN/GRC-171 UHF TRANSCEIVER
COMPONENT 807B UHF TRANSCEIVER
LRU AN/GRR-23 VHF RECEIVER
LRU AN/GRR-24 UHF RECEIVER
COMPONENT TELEPHONE CIRCUITRY UNIT
COMPONENT AN/GSH-56 RECORDER REPRODUCER
COMPONENT AN/TMQ-15 WIND VELOCITY MEASURING DEVICE
COMPONENT OP45 BATTERY CHARGER
CE MAINT. MEPS GENERATOR
COMPONENT AT197 UHF ANTENNA
COMPONENT AS1181 VHF ANTENNA

EQUIPMENT:

HAND TOOLS, SIGNAL GENERATOR (RF AND AUDIO), OSCILLOSCOPE, WATTMETER, DIGITAL VOLTMETER, DECIBEL METER, MILLIVOLTMETER, FREQUENCY COUNTER, 807B TEST BOX, AMMETER, BRIDGING TRANSFORMERS, WIND EQUIPMENT TEST BOX, DISTORTION ANALYZER, MEG OHM METER, ANALOG MULTIMETER, REFLECTOMETER

REFERENCES:

T.O. 31R2-2TSW7-2

T.O. 31R2-2TSW7-3

T.O. 31R2-2TSW7-4

CONDITIONS CUES:

COND: ON EQUIPMENT

CUE: USER COMPLAINT OR RESULT OF PMI

JOT STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 H 0392 6.63 70.0 64.0 55.0 32.0 4.30 18.0
304X4 I 0420 2.87 6.0 8.0 8.0 5.0 5.34 7.0

OSR JOB INVENTORY TASK STATEMENTS:

- 4 H0392 A OPERATIONALLY CHECK UHF EQUIPMENT
- 4 I0420 K ISOLATE MALFUNCTIONS WITHIN BATTERY CHARGERS TO LRU
- 4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT

TASK #: 03070
INSPECT AN/UGC-129 TELETYPEWRITER SET
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: 7, 28
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-2UGC129-1 AND T.O. 31W4-2UGC129-31
TTT: 3
SME OPINION: 3
EQUIPMENT:
CLEANING SUPPLIES, BRUSH, BACK-TO-BACK PLUG
REFERENCES:
T.O. 31W4-2UGC129-1
T.O. 31W4-2UGC129-31
CONDITIONS CUES:
COND: IN-SHOP OR USER SITE, POWER OFF
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 M 0632 2.62 20.0 23.0 22.0 12.0 3.66 7.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM OPERATION CHECK OF TELETYPEWRITER WITH BITE
A CLEAN INTERIOR/EXTERIOR OF CABINET
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK OPERATION OF AUDIO ALARM
OSR JOB INVENTORY TASK STATEMENTS:
4 H0632 A PERFORM OPERATOR MAINTENANCE ON MOBILE EQUIPMENT

TASK #: 03080
TROUBLESHOOT AN/UGC-129 TELETYPEWRITER SET
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-2UGC129-31 (UGC-129 V1) AND
T.O. 31W4-2UGC129-1 (UGC-129)
TTT: 3
SME OPINION: 3
NOTE: AN/UGC-129(V1) DUPLICATES THE 129. CIRCUIT CARDS USE
SAME/SIMILAR NAMES AND PERFORM SAME FUNCTIONS. V1 USES
DOT MATRIX PRINT HEAD AND 40 CHARACTER DISPLAY.
EQUIPMENT:
TOOL KIT, DIGITAL MULTIMETER, OSCILLOSCOPE, SOLDERING KIT
REFERENCES:
T.O. 31W4-2UGC129-31 (UGC-129 V1)
T.O. 31W4-2UGC129-1 (UGC-129)
CONDITIONS CUES:
COND: IN-SHOP, USER SITE, POWER ON/OFF
CUE: PMI FINDING, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0390 3.15 8.0 10.0 11.0 5.0 4.40 7.0
304X4 H 0403 2.45 4.0 6.0 8.0 4.0 4.38 7.0
304X4 J 0540 2.23 7.0 9.0 9.0 3.0 4.87 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY MODULES, CIRCUIT CARDS, AND COMPONENTS
A REMOVE/REPLACE TELETYPEWRITER AND/OR MODULES, CIRCUIT
CARDS, AND PRINTER ASSEMBLY COMPONENTS
A PERFORM BITE CHECK OF CIRCUIT CARDS
A PERFORM LOOP FEEDBACK TEST TO CHECK A3 BOARD
A CHECK PRINT QUALITY OF PAGE PRINTER ASSEMBLY
K CHECK MECHANICAL OPERATION OF PAGE PRINTER ASSEMBLY
OSR JOB INVENTORY TASK STATEMENTS:
4 H0390 A OPERATIONALLY CHECK RADIO-TELETYPE SYSTEMS
4 H0403 A REMOVE OR INSTALL RADIO-TELETYPE SYSTEM LRU
4 H0403 A REMOVE OR INSTALL RADIO-TELETYPE SYSTEM LRU
4 J0540 A REMOVE OR INSTALL RADIO-TELETYPE EQUIPMENT PARTS

TASK #: 03090
ALIGN/ADJUST AN/UGC-129 TELETYPEWRITER SET
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: MONTHLY FOR (V1), -129 INDEFINITE
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-2UGC129-31 (UGC-129 V1) AND
T.O. 31W4-2UGC129-1 (UGC-129)
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, GRAHM GAGE ASSEMBLY (ADJUST BELT TENSION), MOTOR
ADJUSTMENT TOOL
REFERENCES:
T.O. 31W4-2UGC129-31 (UGC-129 V1)
T.O. 31W4-2UGC129-1 (UGC-129)
CONDITIONS CUES:
COND: IN-SHOP OR USER SITE, POWER ON/OFF
CUE: PMI FINDING, USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB IENL 5SKL 7SKL TD ATI
304X4 H 0370 2.97 7.0 9.0 8.0 4.0 5.93 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST PRINT PLATTE(GAP (V1 ONLY)
A ALIGN/ADJUST TIMING BELT TRACKING MECHANISM (V1 ONLY)
A ALIGN/ADJUST PRINT HEAD BELT
A ALIGN/ADJUST FONT TRANSLATION MOTOR TIMING
A ALIGN/ADJUST FONT ROTATION TIMING
A ALIGN/ADJUST LINE FEED TIMING
A ALIGN/ADJUST PRINT HAMMER TIMING BELT
A ALIGN/ADJUST PRINT QUALITY ADJUSTMENT
K APPLY ELECTROMECHANICAL THEORY OF OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
4 H0370 A ALIGN RADIO-TELETYPE SYSTEMS

TASK #: 03100
INSPECT AN/URC-92 HF/SSE TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 1, 64
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-2URC92-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
HAND TOOLS, ALIGNMENT TOOLS, SOLDERING EQUIPMENT, CLEANING
SUPPLIES, VACUUM, OSCILLOSCOPE, REFLECTOMETER, SIGNAL GENERATOR
ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER
REFERENCES:
T.O. 2URC92-2
CONDITIONS CUES:
COND:
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB IENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 55.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN EQUIPMENT
A CHECK POWER SUPPLY VOLTAGE
A CHECK OPERATING CONTROLS
A CHECK TRANSMIT INPUT, OUTPUT AND FREQUENCY
A CHECK RECEIVE SENSITIVITY AND AUDIO LEVEL
A CHECK ANTENNA COUPLER TUNING
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT

TASK #: 03110
TROUBLESHOOT AN/URC-92 HF/SSB TRANSCEIVER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE, AS REQUIRED
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-2URC92-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
HAND TOOLS, ALIGNMENT TOOLS, SOLDERING EQUIPMENT, OSCILLOSCOPE
ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER,
REFLECTOMETER, SIGNAL GENERATOR
REFERENCES:
T.O. 2-2URC92-2
CONDITIONS CUES:
COND: OPERATIONAL OR GARRISON
CUE: USER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 16.0
304X4 J 0516 5.40 46.0 41.0 34.0 15.0 6.17 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY LINE REPLACEABLE UNIT IF OPERATIONAL
K ISOLATE FAULTY COMPONENT IN FM PORTION IF IN GARRISON
A REMOVE/REPLACE LRU, CIRCUIT CARDS, AND PARTS
A OPERATIONALLY CHECK EQUIPMENT
A ALIGN/ADJUST AS NECESSARY
OSR JOB INVENTORY TASK STATEMENTS:
4 J0516 A BENCH CHECK MULTIPLE CHANNEL TRANSCEIVERS
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 03120
INSPECT 184Z-1 ANTENNA MATRIX
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28, 56
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-4-373-6WC-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
CLEANING SUPPLIES
REFERENCES:
T.O. 2-4-373-6WC-1
CONDITIONS CUES:
COND: ON AND OFF EQUIPMENT, EQUIPMENT RELEASED
CUE: PHI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0456 3.30 18.0 18.0 17.0 12.0 3.65 7.0
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT VISUALLY FOR OBVIOUS DEFECTS
A OPERATIONALLY CHECK UNISWITCHES
A CHECK UNISWITCH INDICATOR LIGHT OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
4 I0456 A OPERATIONALLY CHECK FIXED ANTENNA SYSTEMS
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03130
PERFORMANCE CHECK 184Z-1 ANTENNA MATRIX UNISWITCH
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-4-373-2
TTT: 3
SME OPINION: 3
EQUIPMENT:
POWER SUPPLY, RF MATRIX UNISWITCH TEST SET
REFERENCES:
T.O. 2-4-373-2
CONDITIONS CUES:
COND: IN SHOP BENCH WORK
CUE: UNISWITCH INCOPERABLE, FAILURE OF PMI OPERATIONAL CHECK
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0456 3.30 18.0 18.0 17.0 12.0 3.65 7.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK MECHANICAL OPERATION OF UNISWITCH
A CHECK UNISWITCH SELECTION INDICATOR LIGHTS
A CHECK UNISWITCH DIODE CONTINUITY
OSR JOB INVENTORY TASK STATEMENTS:
4 I0456 A OPERATIONALLY CHECK FIXED ANTENNA SYSTEMS

TASK #: 03140
ADJUST 184Z-1 ANTENNA MATRIX UNISWITCH
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-4-373-2
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER
REFERENCES:
T.O. 2-4-373-2
CONDITIONS CUES:
COND: IN SHOP BENCH WORK
CUE: ANTENNA WILL NOT SELECT, UNISWITCH OPERATES CONTINUOUSLY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK OPERATION OF UNISWITCH MICROSWITCHES
A ADJUST MICROSWITCH
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 03150
TROUBLESHOOT 184Z-1 ANTENNA MATRIX
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: THREE MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, THEORY OF RELAY
OPERATION, SAFETY PROCEDURES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 2-4-373-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, POWER SUPPLY, HAND TOOLS, SOLDERING EQUIPMENT
REFERENCES:
T.O. 2-4-373-2
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: LEVEL (RADIO SYSTEM) WILL NOT TUNE OR ANTENNA WILL NOT
SELECT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB IENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK TRANSMIT RECEIVE RELAY PATH CONTINUITY AND
OPERATION
A CHECK TRANSMISSION LINE CONTINUITY
K ISOLATE FAULTY LINE REPLACEABLE UNITS (LRU)
K ISOLATE FAULTY COMPONENTS
A REMOVE AND REPLACE LRU
A REMOVE AND REPLACE COMPONENTS
A ADJUST UNISWITCH MICROSWITCHES
A PERFORMANCE TEST UNISWITCH WITH UNISWITCH TEST SET
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS

TASK #: 03160
INSPECT URG 208U-10 LINEAR POWER AMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY, 7, 14, 28, 56, 84, 168, 336
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
UPG 208U-10 CAN BE CONFIGURED WITH A TRANSMITTER. PERFORMANCE
OF 28 DAY TRANSMITTER SCOPE CONTROL/GCCS PMI IS CRITICAL TO
OPERATION.
EQUIPMENT:
RF SIGNAL GENERATOR, HIGH IMPEDENCE VOLTMETER, DUMMY LOADS,
DIGITAL MULTIMETER, VACUUM CLEANER, GENERAL PURPOSE CLEANER,
GREASE (MIL-L-25681), LUBE OIL (MIL 7870), HAND TOOLS, PAINT
BRUSH, HAND OILER, BITE WATTMETER, LOW PRESSURE AIR SOURCE, LINE
MATCHING TRANSFORMER, WATTMETER, BITE MULTIMETER, SPECTRUM
ANALYZER, TWO TONE GENERATOR, FREQUENCY COUNTER, AUDIO
OSCILLATOR, DISTORTION ANALYZER, TRANSMISSION IMPAIRMENT
MEASUREMENT SET, LOW PASS FILTER, BITE AMPRE METER, ANALOG
MULTIMETER
REFERENCES:
T.O. 31R2-4-200-6WC-1, T.O. 31Z1-6-6WC-2 (TRANSMITTER/GCCS)
CONDITIONS CUES:
COND: SYSTEM OUT OF SERVICE, PATCH OFF USERS, SAFETY OBSERVER
CUE: PMI, TROUBLESHOOTING, COMPONENT REPLACEMENT, OR SYSTEM ALIGNMENT
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM POWER OUTPUT AND INTERMODULATION DISTORTION TEST (-2 T.O.)
- A PERFORM TUNING TIME TEST (-2 T.O.)
- A PERFORM FRONT PANEL BITE METER OPERATIONAL CHECKS
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECT TO INCLUDE FRONT PANEL INDICATOR LIGHTS AND THE VARIABLE TRANSFORMER BRUSH
- A PERFORM TURN-ON/TURN-OFF PROCEDURES
- A PERFORM DYNAMIC OPERATIONAL CHECK OF AUTO-TUNE CIRCUITS AND POWER OUTPUT
- A PERFORM RF SENSITIVITY TEST
- A PERFORM TRANSMIT GAIN CONTROL TEST
- A PERFORM AUTOMATIC LOAD CONTROL TEST
- A PERFORM INTERLOCK AND SHORTING SWITCH TEST
- A CLEAN EQUIPMENT AND INTERIOR/EXTERIOR OF CABINET
- A LUBE TUNING ASSEMBLIES, TUNING COIL, AND LOADING COIL
- A CLEAN BROADBAND AMPLIFIER, DRIVER, AND POWER AMPLIFIER TUBES BY REMOVING/REPLACING
- A LUBE VARIABLE TRANSFORMER DRIVE ASSEMBLY
- A LUBE TRANSMITTER BLOWER MOTOR
- A PERFORM OPERATIONAL TEST OF AUTO TUNE CIRCUITS (-2 T.O.)
- A CHECK BITE METER READINGS (-2 T.O.)
- A PERFORM AUTOMATIC LOAD AND GAIN CONTROL CHECKS (-2 T.O.)
- A CHECK PHASE JITTER READING
- A CHECK SIGNAL TO NOISE RATIO
- A CHECK EXCITER INPUT LEVEL IN DBM
- K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
- K RECOGNIZE TARNISH CORROSION OF SILVER COMPONENTS
- K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
- K RECOGNIZE PROPER OPERATION OR MALFUNCTION OF INTERLOCK SWITCHES OR SHORTING SWITCHES
- K APPLY THEORY OF OPERATION OF VACUUM TUBE LIMITER CIRCUITS

OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03170
TROUBLESHOOT URG 208U-10 LINEAR POWER AMPLIFIER TO SUBASSEMBLY LEVEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY
QJT TRAINABLE: YES, NO (REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3 OR 5

EQUIPMENT:
RF SIGNAL GENERATOR, HIGH IMPEDENCE VOLTMETER, DUMMY LOADS, DIGITAL MULTIMETER, HAND TOOLS, BITE WATTMETER, USE LINE MATCHING TRANSFORMER, WATTMETER, CAPACITOR TESTER, TRANSISTOR TESTER, INDUCTOR TESTER, HIGH VOLTAGE INSULATION BREAKDOWN TESTER, OSCILLOSCOPE, RF VOLTMETER, HIGH VOLTAGE PROBE, TUBE TESTER, SPECTRUM ANALYZER, BITE MULTIMETER, TWO TONE GENERATOR, TRANSMISSION IMPAIRMENT MEASUREMENT SET, DISTORTION ANALYZER, TUBE TESTER

REFERENCES:
T.O. 31R2-4-200-2

CONDITIONS CUES:
COND: SYSTEM OUT OF SERVICE, PATCH OFF USERS, SAFETY OBSERVER
CUE: PHI FINDING, TRANSMITTER FAILURE

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0522 6.43 46.0 37.0 30.0 14.0 6.02 12.0
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 H 0392 6.63 79.0 64.0 55.0 32.0 4.30 16.0

ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES

OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0522 A BENCH CHECK UHF POWER AMPLIFIERS

TASK #: 03180
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 2A140L
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: DAILY OR QUARTERLY
 OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
 QTP ADEQUATE: YES
 TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
 TTT: NONE
 SME OPINION: 3
EQUIPMENT:
 DIGITAL MULTIMETER, HANDTOOLS, RELAY BURNISHING TOOL, RF SIGNAL GENERATOR, BITE MULTIMETER, SOLDERING KIT
REFERENCES:
 T.O. 31R2-4-200-2
CONDITIONS CUES:
 COND: POWER ON/OFF, SAFETY OBSERVER
 CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE,
 FAILED CONTROL AMPLIFIER COMPONENTS
JOB STANDARDS:
 IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
 304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
 K ISOLATE FAULTY AMPLIFIER CONTROL RELAYS
 K ISOLATE FAULTY AMPLIFIER CONTROL ROTARY SWITCHES
 K ISOLATE FAULTY AMPLIFIER CONTROL DC MOTOR
 K ISOLATE FAULTY AMPLIFIER CONNECTOR
 K ISOLATE TO FAULTY ROTARY SWITCHES
 K APPLY THEORY OF OPERATION OF ROTARY SWITCHES
 K TROUBLESHOT ROTARY SWITCHES
 A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
 K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
OSR JOB INVENTORY TASK STATEMENTS:
 4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
 4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03190
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 2A13 KEYINGBIAS SUPPLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: DAILY OR BI-MONTHLY
 OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
 QTP ADEQUATE: YES
 TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
 TTT: NONE
 SME OPINION: 3
EQUIPMENT:
 HIGH VOLTAGE PROBE, HANDTOOLS, DIGITAL MULTIMETER, RF SIGNAL GENERATOR, RELAY BURNISHING TOOL, BITE MULTIMETER, SOLDERING KIT
REFERENCES:
 T.O. 31R2-4-200-2
CONDITIONS CUES:
 COND: CHECKED ON BENCH OR CABINET, POWER ON/OFF, SAFETY OBSERVER
 CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED KEYING BIAS SUPPLY COMPONENTS
JOB STANDARDS:
 IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
 304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
 K ISOLATE FAULTY BIAS SUPPLY RELAYS
 K ISOLATE FAULTY BIAS SUPPLY CAPACITORS
 A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
 K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
 4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
 4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03200
ALIGN/ADJUST 208U-10 RF AMPLIFIER UNIT 2 KEYING BIAS SUPPLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR MONTHLY
QJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, DIGITAL MULTIMETER, RF SIGNAL GENERATOR,
BITE MULTIMETER
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST POWER AMPLIFIER STATIC PLATE CURRENTS
A ALIGN/ADJUST DRIVER AMPLIFIER PLATE CURRENTS
A ALIGN/ADJUST AUTOMATIC LOAD CONTROL
A ALIGN/ADJUST TUNING POWER
A ALIGN/ADJUST AUTOMATIC DISIPATION LIMITER
A ALIGN/ADJUST REFLECTIVE POWER OVERLOAD CIRCUIT
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03210
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 2A18 DRIVERAMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR BI-MONTHLY
QJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, HIGH IMPEDENCE VOLTMETER, DUMMY LOADS,
DIGITAL MULTIMETER, HAND TOOLS, BITE WATTMETER, WATTMETER,
CAPACITOR TESTER, OSCILLOSCOPE, RF VOLTMETER, HIGH VOLTAGE PROBE,
TUBE TESTER, INDUCTOR TESTER, BITE MULTIMETER, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SEMICONDUCTOR DEVICES
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03220
ALIGN/ADJUST URG 208U-10 RF AMPLIFIER UNIT 2 2A18 DRIVERAMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, HAND TOOLS, BITE WATTMETER, BITE
MULTIMETER
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: REPLACE DRIVER ASSEMBLY COMPONENT, TRANSMITTER FAILURE,
PMI FINDING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST COURSE TUNING DISCRIMINATOR
CAPACITOR/RESISTOR AT SPECIFIC RADIO FREQUENCIES
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03230
SYNCHRONIZE URG 208U-10 RF AMPLIFIER UNIT 2 DRIVER PLATETUNING ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A SYNCHRONIZE MOVEMENT OF TUNING CAPACITOR AND INDUCTOR
COIL
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03240
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 2A8, 2A9, 2A10, 2A11 DRIVE ASSEMBLIES
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY, MONTHLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DIGITAL MULTIMETER, BITE WATTMETER,
HAND TOOLS, SOLDERING KIT, BITE MULTIMETER, GRID-PIP METER,
OILER, OIL
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON/OFF CABINET OR ON BENCH,
SAFETY OBSERVER
CUE: PMI FINDING, TRANSMITTER FAILURE, FAILED DRIVER PLATE
TUNING ASSEMBLY COMPONENTS, FAILED DRIVE COMPONENTS,
OUT OF SYNCHRONIZATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0380 4.97 67.0 65.0 57.0 25.0 3.61 18.0
ACTIVITIES SKILL KNOWLEDGE:
A LUBE DRIVE MECHANISMS
K ISOLATE FAULTY MECHANICAL ASSEMBLIES
K ISOLATE FAULTY COMPONENTS
K CHECK FOR ADEQUATE LUBRICATION
A REMOVE/REPLACE ASSEMBLY PARTS AND COMPONENTS
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0380 A LUBRICATE MECHANICAL PARTS OF GROUND RADIO EQUIPMENT

TASK #: 03250
SYNCHRONIZE URG 208U-10 RF AMPLIFIER UNIT 2 2A8, 2A9, 2A10, 2A11 DRIVE ASSEMBLIES
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, HANDTOOLS
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL - ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.23 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST FOLLOW-ON POTENTIOMETERS
A SYNCHRONIZE DRIVE ASSEMBLIES WITH DRIVEN UNITS
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03260
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 2A7 DIRECTIONAL COUPLER AND LOW P
ASS FILTER ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3 OR 5
EQUIPMENT:
WATTMETER, RF SIGNAL GENERATOR, CAPACITOR TESTER, INDUCTOR
TESTER, HANDTOOLS, DIGITAL MULTIMETER, SOLDERING KIT, SPECTRUM
ANALYZER, INSULATION BREAKDOWN TESTER, BITE MULTIMETER
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED
DIRECTIONAL COUPLER OR LOW PASS FILETER ASSEMBLY COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY COMPONENTS
K ISOLATE FAULTY PARTS
A REMOVE/REPLACE ASSSEMBLY PARTS AND COMPONENTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03270
ALIGN/ADJUST 208U-10 RF AMPLIFIER UNIT 2 2A7 DIRECTIONALCOUPLER AND LOWPASS FI
LTER ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3 OR 5
EQUIPMENT:
WATTMETER, RF SIGNAL GENERATOR, BITE WATTMETER, HANDTOOLS,
CAPACITOR TESTER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CALIBRATE BITE WATTMETER TO READ THE SAME AS EXTERNAL
WATTMETER
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGW ULTRA HIGH FREQUENCY (UHF) EQUIPMENT

TASK #: 03280
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 2A20 POWER AMPLIFIER SUBASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 5
EQUIPMENT:
RF SIGNAL GENERATOR, BITE WATTMETER OR WATTMETER, CAPACITOR
ANALYZER, INSULATION BREAKDOWN TESTER, DIGITAL MULTIMETER,
HIGH VOLTAGE PROBE, BITE MULTIMETER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CONTROL GRID COUPLING NETWORK
K ISOLATE FAULTY OUTPUT COUPLING NETWORKS
K ISOLATE FAULTY CATHODE DECOUPLING NETWORKS
K ISOLATE FAULTY HEATER CATHODE TRANSFORMER
K ISOLATE FAULTY NEUTRALIZATION NETWORK
K ISOLATE FAULTY FEEDBACK NETWORK
K ISOLATE FAULTY TUBE SOCKET
K ISOLATE FAULTY PLATE DECOUPLING NETWORK
A REMOVE/REPLACE ASSEMBLY PARTS AND COMPONENTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03290
ALIGN/ADJUST 208U-10 RF AMPLIFIER UNIT 2 2A20 POWER AMPLIFIER SUBASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY OR SEMIANNALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, BITE WATTMETER OR WATTMETER, RF VOLTMETER,
BITE MULTIMETER, HAND TOOLS, CAPACITOR TESTER, DIGITAL
MULTIMETER, OSCILLOSCOPE
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST FILAMENT VOLTAGE
A ALIGN/ADJUST STATIC PLATE CURRENT
A PERFORM RF FEEDBACK CHECK
A ALIGN/ADJUST NEUTRALIZATION
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03300
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 SERVO AMPLIFIERS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR QUARTERLY, 14
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3 OR 5
EQUIPMENT:
RF SIGNAL GENERATOR, BITE WATTMETER OR WATTMETER, DIGITAL
MULTIMETER, TRANSISTOR TESTER, CAPACITOR TESTER, OSCILLOSCOPE,
BITE MULTIMETER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SERVO AMPLIFIERS BY MONITORING SERVO
MOTOR MOVEMENT
K ISOLATE FAULTY SEMICONDUCTOR DEVICES
K ISOLATE FAULTY SERVO AMPLIFIER RESISTORS
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03310
TROUBLESHOOT URG 208U-10 RF AMPLIFIER UNIT 2 METER BOX
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY, MONTHLY, OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, CAPACITOR TESTER, INDUCTOR TESTER, RF SIGNAL
GENERATOR, BITE WATTMETER OR WATTMETER, OSCILLOSCOPE, BITE
MULTIMETER, TUBE TESTER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILURE
OF METER BOX COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY DUAL DIODE VACUUM TUBE
K ISOLATE FAULTY METER SELECTOR SWITCH
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03320
ALIGN/ADJUST 208U-10 RF AMPLIFIER UNIT 2 METER BOX
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DIGITAL MULTIMETER, BITE WATTMETER,
BITE MULTIMETER, HAND TOOLS
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CALIBRATE PA PLATE RF VOLTMETER
A CALIBRATE PA GRID RF VOLTMETER
A ALIGN/ADJUST LOADING COMPARATOR
A ALIGN/ADJUST TRANSMIT GAIN CONTROL
A ALIGN/ADJUST AUTOMATIC LOAD CONTROL
A ZERO METER MOVEMENTS
A ALIGN/ADJUST AUTOMATIC DISPATION LIMITER
A ALIGN/ADJUST DRIVER STATIC PLATE CURRENTS
A ALIGN/ADJUST POWER AMPLIFIER PLATE CURRENT
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03330
TROUBLESHOOT 208U-10 RF AMPLIFIER UNIT 2 MINUS 1250 VOLTZENER DIODE VOLTAGE DIVIDER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY, BI-MONTHLY, OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, HIGH VOLTAGE PROBE, HAND TOOLS, SOLDERING
KIT, ZENER DIODE TESTER (LOCAL MANUFACTURE)
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILURE
OF MINUS 1250 VOLT ZENER DIODE VOLTAGE DIVIDER COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK YE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY INSULATORS
K ISOLATE FAULTY MICA INSULATORS
K ISOLATE FAULTY VOLTAGE DIVIDER ZENER DIODES
A REMOVE/REPLACE ASSEMBLY PARTS AND COMPONENTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
K APPLY THEORY OF OPERATION OF INSULATION BREAKDOWN
OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DIS-
CRETE PARTS

TASK #: 03349

TRROUBLESHOOT 208U-10 RF AMPLIFIER UNIT 2 PA TUNING COMPONENTS

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: DAILY OR QUARTERLY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N

TTT: NONE

SME OPINION: 3

EQUIPMENT:

RF SIGNAL GENERATOR, BITE WATTMETER, WATTMETER, INSULATION

BREAKDOWN TEST SET, HAND TOOLS, DIGITAL MULTIMETER

REFERENCES:

T.O. 31R2-4-200-2

CONDITIONS CUES:

COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER, FAILED
PA TUNING COMPONENTS

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H	0378	6.82	63.0	60.0	51.0	28.0	6.44
304X4	J	0541	5.53	62.0	57.0	49.0	25.0	5.16
								18.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY PA TUNING COIL

K ISOLATE FAULTY PA TUNING/LOADING CAPACITORS

K ISOLATE FAULTY LOADING COIL

K ISOLATE FAULTY LOADING COIL SHORTING SWITCHES

K ISOLATE FAULTY MECHANICAL SYNCHRONIZATIONS

K ISOLATE FAULTY MECHANICAL DRIVE COUPLINGS

K ISOLATE FAULTY PARASYTIC SUPPRESSOR

K ISOLATE FAULTY PA TUNING INSULATORS

A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS

K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES

K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT

4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03350

ALIGN/ADJUST 208U-10 RF AMPLIFIER UNIT 2 PA TUNING COMPONENTS

DUTY CODE: X8

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: MONTHLY OR QUARTERLY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N

TTT: NONE

SME OPINION: 3

EQUIPMENT:

HANDTOOLS

REFERENCES:

T.O. 31R2-4-200-2

CONDITIONS CUES:

COND: POWER OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER

CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	J	0499	6.78	63.0	60.0	51.0	26.0	6.13
								18.0

ACTIVITIES SKILL KNOWLEDGE:

A SYNCHRONIZE PA TUNING COIL WITH ITS DRIVE

A SYNCHRONIZE TUNING CAPACITORS WITH EACH OTHER AND WITH ITS DRIVE

A SYNCHRONIZE PA LOADING COIL ROLLERS TO ITS DRIVE

A SYNCHRONIZE PA LOADING COIL SHORTING SWITCHES TO ITS DRIVE

K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES

OSR JOB INVENTORY TASK STATEMENTS:

4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03360
TROUBLESHOOT 208U-10 RF AMPLIFIER UNIT 2 PA CHOPPER BOARD AND LOADING LOCKOUT ASSEMBLIES
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, BITE WATTMETER, WATTMETER, DIGITAL MULTIMETER, BITE MULTIMETER, OSCILLOSCOPE, SOLDERING KIT, HAND TOOLS
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 64.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CHOPPER POWER SUPPLY
K ISOLATE FAULTY CHOPPERS
K ISOLATE FAULTY SERVO SUMMARY CIRCUITS
K ISOLATE FAULTY LOADING LOCKOUT CIRCUIT
K ISOLATE FAULTY TEC ADJUST CIRCUIT
K ISOLATE FAULTY SERVO AMPLIFIER SIGNAL INPUT COUPLING NETWORKS
K ISOLATE FAULTY CHOPPER BOARD AND LOCKOUT RESISTORS
K ISOLATE FAULTY CHOPPER BOARD AND LOCKOUT RELAYS
K ISOLATE FAULTY CHOPPER BOARD AND LOCKOUT SILICON CONTROL RECTIFIERS
A REMOVE/ REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03370
ALIGN/ADJUST 208U-10 RF AMPLIFIER UNIT 2 PA CHOPPER BOARD AND LOADING LOCKOUT ASSEMBLIES
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
HAND TOOLS, WATTMETER, BITE WATTMETER, DIGITAL MULTIMETER, BITE MULTIMETER, OSCILLOSCOPE
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST TRANSMIT GAIN CONTROL
A MONITOR BEHAVIOR OF PA FINE TUNE PHASE DETECTOR HIGH FREQUENCY COMPENSATION ADJUSTMENT
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03380
ALIGN/ADJUST URG 208U-10 LINEAR POWER AMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DIGITAL MULTIMETER, BITE MULTIMETER,
BITE WATTMETER, WATTMETER, OSCILLOSCOPE, RF VOLTMETER,
DUMMYLOAD
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, USERS PATCHED OFF, SAFETY
OBSERVER
CUE: PFM FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST POWER AMPLIFIER STATIC PLATE CURRENTS
A ALIGN/ADJUST DRIVER AMPLIFIER PLATE CURRENTS
A ALIGN/ADJUST AUTOMATIC LOAD CONTROL
A ALIGN/ADJUST TUNING POWER
A ALIGN/ADJUST AUTOMATIC DISSIPATION LIMITER
A ALIGN/ADJUST REFLECTIVE POWER OVERLOAD CIRCUIT
A ALIGN/ADJUST COURSE TUNING DISCRIMINATOR
CAPACITOR/RESISTOR AT SPECIFIC RADIO FREQUENCIES
A SYNCHRONIZE MOVEMENT OF TUNING CAPACITOR AND INDUCTOR
COIL
A ADJUST FOLLOW-ON POTENTIOMETERS
A CALIBRATE BITE WATTMETER TO READ THE SAME AS EXTERNAL
WATTMETER
A ALIGN/ADJUST FILAMENT VOLTAGE
A ALIGN/ADJUST STATIC PLATE CURRENT
A PERFORM RF FEEDBACK CHECK
A ALIGN/ADJUST NEUTRALIZATION
A CALIBRATE PA PLATE RF VOLTMETER
A CALIBRATE PA GRID RF VOLTMETER
A ALIGN/ADJUST LOADING COMPARETOR
A ALIGN/ADJUST TRANSMIT GAIN CONTROL
A ALIGN/ADJUST AUTOMATIC LOAD CONTROL
A ZERO METER MOVEMENTS
A ALIGN/ADJUST AUTOMATIC DISSIPATION LIMITER
A ALIGN/ADJUST DRIVER STATIC PLATE CURRENTS
A ALIGN/ADJUST POWER AMPLIFIER PLATE CURRENT
A MONITOR BEHAVIOR OF PA FINE TUNE PHASE DETECTOR HIGH
FREQUENCY COMPENSATION ADJUSTMENT
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEM-
BLIES
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03390
INSPECT URG 208U-10 POWER SUPPLY UNIT 1
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY, 7, 14, 28, 56, 84, 168, 336
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: 3
SME OPINION: 3
EQUIPMENT:
VACUUM CLEANER, GENERAL PURPOSE CLEANER, DIGITAL MULTIMETER,
HAND TOOLS, PAINT BRUSH, LOW PRESSURE AIR SOURCE, BITE
MULTIMETER, LUBRICATING OIL
REFERENCES:
T.O. 31R2-4-200-6WC-1
T.O. 31ZI-6-6WC-2 (TRANSMITTER/GCCS)
CONDITIONS CUES:
COND: SYSTEM OUT OF SERVICE, PATCH OFF USERS, SAFETY OBSERVER
CUE: PMI, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 1SKL 7SKL TD A/I
304X4 H 0383 5.95 60.0 63.0 36.0 37.0 - 1V 18.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM TURN-ON/TURN-OFF PROCEDURES
A PERFORM INTERLOCK AND SHORTING SWITCH TEST
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS TO
INCLUDE VARIABLE TRANSFORMER DRIVE AND THE POWER
SUPPLY CONTROL PANEL INDICATOR LIGHTS
A CLEAN INTERIOR/EXTERIOR OF CABINET AND REMOVE CUT LOOSE
DUST AND DEBRIS
A LUBE VARIABLE TRANSFORMER DRIVE ASSEMBLY
A LUBE TRANSMITTER BLOWER MOTOR
A CHECK BITE METER READINGS (-2 T.O.)
A PERFORM FRONT PANEL POWER SUPPLY BITE METER OPERA-
TIONAL CHECKS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
K APPLY THEORY OF OPERATION OF VACUUM TUBE LIMITER
CIRCUITS
K APPLY THEORY OF OPERATION FOR STATIC ELECTRIC VOLTAGE
DISCHARGE ASSEMBLIES
K RECOGNIZE PROPER OPERATION OR MALFUNCTION OF INTER-
LOCK/SHORTING SWITCHES
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEM-
BLIES
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03400
TROUBLESHOOT URG 208U-10 POWER SUPPLY UNIT 1
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR BI-MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 306X4-31JA TO QTP 306X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
BITE MULTIMETER, DIGITAL MULTIMETER, HIGH VOLTAGE PROBE, HAND
TOOLS
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: EQUIPMENT ON CABINET, PATCH OFF USERS, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY 28 VOLT POWER SUPPLY
K ISOLATE FAULTY 1A8 PA BIAS SUPPLY
K ISOLATE FAULTY PA POWER CONTROL CIRCUITS
K ISOLATE FAULTY PA INTERLOCK CIRCUITS
K ISOLATE FAULTY 1A10 PA AUTOMATIC FILAMENT VOLTAGE
REGULATOR
K ISOLATE FAULTY 6250 VOLT/1250 VOLT POWER SUPPLIES
K ISOLATE FAULTY 1A7 LOCAL CONTROL PANEL
K ISOLATE FAULTY 1TB6 PA PLATE CURRENT OVERLOAD CIR-
CUITS
A REMOVE/ REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS

TASK #: 03410

TROUBLESHOOT URG 208U-10 POWER SUPPLY UNIT 1 28 VOLT POWER SUPPLY

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: MONTHLY OR ANNUALLY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N

TTT: NONE

SME OPINION: 3

EQUIPMENT:

DIGITAL MULTIMETER, BITE MULTIMETER, HAND TOOLS, SOLDERING KIT

REFERENCES:

T.O. 31R2-4-200-2

CONDITIONS CUES:

COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER

CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE,
FAILED 28 VOLT POWER SUPPLY COMPONENTS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY 28 VOLT POWER SUPPLY TRANSFORMER
K ISOLATE FAULTY SUPPLY BRIDGE RECTIFIER
K ISOLATE FAULTY FILTER CAPACITORS
K ISOLATE FAULTY FILTER CHOKE
K ISOLATE FAULTY 28 VOLT POWER SUPPLY FUSES
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS

TASK #: 03420
TROUBLESHOOT URG 208U-10 POWER SUPPLY UNIT 1 1A8 BIAS SUPPLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY, QUARTERLY, OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
BITE MULTIMETER, DIGITAL MULTIMETER, HAND TOOLS, SOLDERING KIT,
TUBE TESTER
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED
PA BIAS POWER SUPPLY COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0518 5.30 43.0 42.0 41.0 20.0 5.34 12.0
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY BIAS SUPPLY TRANSFORMER
K ISOLATE FAULTY BIAS SUPPLY RECTIFIER DIODES
K ISOLATE FAULTY FILTER CAPACITORS
K ISOLATE FAULTY BIAS SUPPLY RESISTORS
K ISOLATE FAULTY BIAS SUPPLY ELECTRON TUBE
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0518 A BENCH CHECK POWER SUPPLY EQUIPMENT
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DISCRETE PARTS

TASK #: 03430
TROUBLESHOOT URG 208U-10 POWER SUPPLY UNIT 1 PA POWER CONTROL AND INTERLOCK CI
RCUITS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED
POWER CONTROL CIRCUIT COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY TIME DELAY CIRCUITS
K ISOLATE FAULTY INDICATOR LAMP CIRCUITS
K APPLY THEORY OF OPERATION OF ELECTRICAL SWITCHES
K ISOLATE FAULTY ELECTRICAL SWITCHES
K TROUBLESHOOT ELECTRICAL SWITCHES
K ISOLATE FAULTY FUSES
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DISCRETE PARTS

TASK #: 03440
TROUBLESHOOT URG 208U-10 POWER SUPPLY UNIT 1 1A10 AUTOMATIC FILAMENT VOLTAGE REGULATOR
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY, SEMI-ANNUALLY, OR ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, SOLDERING KIT, HAND TOOLS
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED AUTOMATIC FILAMENT VOLTAGE REGULATOR COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SEMICONDUCTOR DEVICES
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DISCRETE PARTS

TASK #: 03450
ALIGN/ADJUST URG 208U-10 POWER SUPPLY UNIT 1 1A10 AUTOMATIC FILAMENT VOLTAGE REGULATOR
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FILAMENT VOLTAGE REGULATOR COMPONENT FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST FILAMENT VOLTAGE RANGE
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03460
TROUBLESHOOT URG 208U-10 POWER SUPPLY UNIT 1 6250 VOLT/1250 VOLT DC POWER SUPPLY

DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY, SEMI-ANNUALLY, OR ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3

EQUIPMENT:
BITE MULTIMETER, DIGITAL MULTIMETER, HIGH VOLTAGE PROBE, HAND TOOLS, SOLDERING KIT

REFERENCES:
T.O. 31R2-4-200-2

CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED POWER SUPPLY COMPONENTS

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0

ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY FUSES
K ISOLATE FAULTY POWER TRANSFORMER
K ISOLATE FAULTY POWER SUPPLY FILTER CHOKES
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DISCRETE PARTS

TASK #: 03470
TROUBLESHOOT URG 208U-10 POWER SUPPLY UNIT 1 1TB6 PLATE CURRENT OVERLOAD CIRCUIT

DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3

EQUIPMENT:
BITE MULTIMETER, BITE WATTMETER, TRANSISTOR TESTER, HAND TOOLS, SOLDERING KIT, CAPACITOR TESTER, PORTABLE POWER SUPPLIES, DIGITAL MULTIMETER

REFERENCES:
T.O. 31R2-4-200-2

CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE. FAILED PLATE CURRENT OVERLOAD CIRCUIT COMPONENTS

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0

ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY COMPONENTS AND PARTS
A REMOVE/REPLACE ASSEMBLY COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DISCRETE PARTS

TASK #: 03480
ALIGN/ADJUST URG 208U-10 POWER SUPPLY UNIT 1 1TB6 PLATE CURRENT OVERLOAD CIRC
UIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY OR ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JA TO QTP 304X4-31JA4N
TTT: NONE
SME OPINION: 3
EQUIPMENT:
HAND TOOLS, PORTABLE POWER SUPPLIES
REFERENCES:
T.O. 31R2-4-200-2
CONDITIONS CUES:
COND: POWER OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, FAILURE OF PLATE CURRENT
OVERLOAD CIRCUIT COMPONENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB IENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST PA PLATE CURRENT OVERLOAD THRESHOLD
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
K APPLY THEORY OF OPERATION OF TRANSISTOR CONTROLLED
RELAY CIRCUITS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03490
INSPECT URG 208U-3 LINEAR POWER AMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY, 7, 14, 28, 56, 84, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: 3
SME OPINION: 3
URG 208U-3 CAN BE CONFIGURED WITH A TRANSMITTER. PERFORMANCE
OF 28 DAY TRANSMITTER SCOPE CONTROL/GCCS PMI IS CRITICAL TO
OPERATION.
EQUIPMENT:
RF SIGNAL GENERATOR, HIGH IMPEDANCE VOLTMETER, DUMMY LOADS,
DIGITAL MULTIMETER, VACUUM CLEANER, GENERAL PURPOSE CLEANER,
GREASE (MIL-L-25681), LUBE OIL (MIL 7870), HAND TOOLS,
PAINT BRUSH, HAND OILER, BITE WATTMETER, LOW PRESSURE AIR
SOURCE, USE LINE MATCHING TRANSFORMER, WATTMETER,
BITE MULTIMETER, FREQUENCY COUNTER, SPECTRUM ANALYZER
LOW PASS FILTER, TRANSMISSION IMPERAMENT MEASUREMENT SET,
TWO TONE GENERATOR, AUDIO OSCILLATOR, DISTORTION ANALYZER
REFERENCES:
T.O. 31R2-4-316-6WC-1
T.O. 31Z1-6-6WC-2 (TRANSMITTER/GCCS)
CONDITIONS CUES:
COND: SYSTEM OUT OF SERVICE, PATCH OFF USERS, SAFETY OBSERVER
CUE: PMI, TROUBLESHOOTING, COMPONENT REPLACEMENT, OR SYSTEM
ALIGNMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM FRONT PANEL BITE METER OPERATIONAL CHECKS
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS INCLUDING THE VARIABLE TRANSFORMER BRUSH
A PERFORM TURN-ON/TURN-OFF PROCEDURES
A PERFORM DYNAMIC OPERATIONAL CHECK OF AUTO-TUNE CIRCUITS AND POWER OUTPUT
A PERFORM RF SENSITIVITY TEST
A PERFORM TRANSMIT GAIN CONTROL TEST
A PERFORM AUTOMATIC LOAD CONTROL TEST
A PERFORM POWER AMPLIFIER DISCRIMINATOR TESTS
A PERFORM INTERLOCK AND SHORTING SWITCH TEST
A CLEAN INTERIOR/EXTERIOR OF CABINET AND EQUIPMENT
A LUBE TUNING ASSEMBLIES, TUNING COIL, AND LOADING COIL
A CLEAN INPUT AMPLIFIER, DRIVER, AND POWER AMPLIFIER TUBES BY REMOVING/REPLACING
A PERFORM OPERATIONAL TEST OF AUTO TUNE CIRCUITS (-2 T.O.)
A CHECK BITE METER READINGS (-2 T.O.)
A PERFORM AUTOMATIC LOAD AND GAIN CONTROL CHECKS (-2 T.O.)
A PERFORM POWER OUTPUT AND INTERMODULATION DISTORTION TEST (-2 T.O.)
A PERFORM TUNING TIME TEST (-2 T.O.)
A PERFORM PHASE-JITTER TEST
A PERFORM SIGNAL TO NOISE RATIO TEST
A ADJUST EXCITER INPUT AND DBM LEVEL
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
K RECOGNIZE TARNISH CORROSION OF SILVER COMPONENTS
K RECOGNIZE PROPER OPERATION OR MALFUNCTION OF INTERLOCK SWITCHES OR SHORTING SWITCHES
K APPLY THEORY OF OPERATION OF VACUUM TUBE LIMITER CIRCUITS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03500
TROUBLESHOOT URG 208U-3 LINEAR POWER AMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 5
EQUIPMENT:
RF SIGNAL GENERATOR, HIGH IMPEDANCE VOLTMETER, DUMMY LOADS,
DIGITAL MULTIMETER, HAND TOOLS, BITE WATTMETER,
USE LINE MATCHING TRANSFORMER, WATTMETER, CAPACITOR
TESTER, TRANSISTOR TESTER, INDUCTOR TESTER, HIGH VOLTAGE
INSULATION BREAKDOWN TESTER, OSCILLOSCOPE, RF VOLTMETER,
HIGH VOLTAGE PROBE, TUBE TESTER, SPECTRUM ANALYZER,
BITE MULTIMETER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: SYSTEM OUT OF SERVICE, PATCH OFF USERS, SAFETY OBSERVER
CUE: PMI FINDING, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.8 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY 1A19 TUNE CYCLE CONTROL
K ISOLATE FAULTY INPUT AMPLIFIER /DRIVER CHASSIS
K ISOLATE FAULTY 1A15 PA TUNE GRID DRIVE ASSEMBLY
K ISOLATE FAULTY 1A17 PA TUNE NUMBER 2 DRIVE ASSEMBLY
K ISOLATE FAULTY 1A16 PA PLATE TUNING NUMBER 1 DRIVE
ASSEMBLY
K ISOLATE FAULTY 1A18 PA LOADING COIL DRIVE ASSEMBLY
K ISOLATE FAULTY 1A13 DIRECTIONAL COUPLER
K ISOLATE FAULTY 1A27 LOW PASS FILTER ASSEMBLY
K ISOLATE FAULTY POWER AMPLIFIER COMPARTMENT
K ISOLATE FAULTY 1A9, 1A10, 1A11, AND 1A12 SERVO AMPLIFIERS
K ISOLATE FAULTY 1A20 METER PANEL
K ISOLATE FAULTY L21 AND L22 PA TUNING COIL ASSEMBLY
K ISOLATE FAULTY L23 PA LOADING COIL ASSEMBLY
K ISOLATE FAULTY ADJUSTMENT AND SERVO SUMMARY CONTROL
PANELS
K ISOLATE FAULTY REFLECTED POWER OVERLOAD AND LOADING
AND LOCKOUT CONTROL
K ISOLATE FAULTY COURSE POSITIONING CONTROL AND IN-
TERMEDIATE GAIN CONTROL (IGC) CIRCUITS
K ISOLATE FAULTY 1A22 DIGITAL DISCRIMINATOR
K ISOLATE FAULTY 1A14 DETECTOR ASSEMBLY
A REMOVE AND REPLACE FAULTY ASSEMBLIES, COMPONENTS, AND
PARTS
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03510
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT 1A19 TUNE CYCLE CONTROL

DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1

TNOTES:

(CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3

EQUIPMENT:

DIGITAL MULTIMETER, HANITOOLS, RELAY BURNISHING TOOL, RF SIGNAL GENERATOR, BITE MULTIMETER, SOLDERING KIT

REFERENCES:

T.O. 31R2-4-316-2

CONDITIONS CUES:

COND: POWER ON/OFF, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H 0378	6.82	63.0	60.0	51.0	28.0	6.44	18.0
304X4	J 0541	5.53	62.0	57.0	49.0	25.0	5.16	18.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY ROTARY SWITCHES
K TROUBLESHOOT ROTARY SWITCHES
K ISOLATE FAULTY AMPLIFIER CONNECTOR
K ISOLATE FAULTY AMPLIFIER CONTROL RELAYS
K ISOLATE FAULTY AMPLIFIER CONTROL DC MOTOR
A REMOVE/REPLACE COMPONENTS AND PARTS
K APPLY THEORY OF OPERATION OF ROTARY SWITCHES

OSR JOB INVENTORY TASK STATEMENTS:

4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03520

TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT 1A15 INPUT AMPLIFIER/DRIVER CHASSIS

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

(CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT:
SME OPINION: 3

EQUIPMENT:

RF SIGNAL GENERATOR, HIGH IMPEDANCE VOLTMETER, DUMMY LOADS, DIGITAL MULTIMETER, HAND TOOLS, BITE WATTMETER, WATTMETER, CAPACITOR TESTER, OSCILLOSCOPE, RF VOLTMETER, HIGH VOLTAGE PROBE, TUBE TESTER, INDUCTOR TESTER, BITE MULTIMETER, SOLDERING KIT

REFERENCES:

T.O. 31R2-4-316-2

CONDITIONS CUES:

COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H 0378	6.82	63.0	60.0	51.0	28.0	6.44	18.0
304X4	J 0541	5.53	62.0	57.0	49.0	25.0	5.16	18.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY DRIVER AMPLIFIER TRANSFORMERS
K ISOLATE FAULTY DRIVER AMPLIFIER DISCRIMINATOR CIRCUITS
K ISOLATE FAULTY DRIVER AMPLIFIER MICROSWITCHES
K ISOLATE FAULTY DRIVER AMPLIFIER INSULATORS
K ISOLATE FAULTY DRIVER AMPLIFIER TUBE SOCKETS/CONNECTORS
A REMOVE/REPLACE RF AMPLIFIER UNIT COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES

OSR JOB INVENTORY TASK STATEMENTS:

4 H0378 A ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03530
ALIGN/ADJUST URG 208U-3 RF AMPLIFIER UNIT INPUT/DRIVER AMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, HAND TOOLS, BITE WATTMETER,
BITE MULTIMETER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT IN CABINET, SAFETY OBSERVER
CUE: REPLACE DRIVER ASSEMBLY COMPONENT, TRANSMITTER FAILURE,
PMI FINDING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST COURSE TUNING DISCRIMINATOR
CAPACITOR/RESISTOR AT SPECIFIC RADIO FREQUENCIES
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03540
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT 1A15, 1A16, 1A17, 1A18 DRIVE ASSEMBLIES
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3 OR 5
EQUIPMENT:
DIGITAL MULTIMETER, HAND TOOLS, SOLDERING KIT, RF SIGNAL GENERATOR, BITE WATTMETER, BITE MULTIMETER, OILER WITH OIL
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON/OFF CABINET, SAFETY OBSERVER
CUE: PMI FINDING, TRANSMITTER FAILURE, FAILED DRIVE OR DRIVER PLATE TUNING ASSEMBLY, OUT OF SYNCHRONIZATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0380 4.97 67.0 65.0 57.0 25.0 3.61 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY DRIVE ASSEMBLY POTENTIOMETER
K ISOLATE FAULTY DRIVE ASSEMBLY DRIVE MOTOR
K ISOLATE FAULTY SYNCHRONIZATION OF DRIVE MECHANISMS
K ISOLATE FAULTY DRIVE ASSEMBLY CONNECTOR
K ISOLATE FAULTY DRIVE ASSEMBLY GEARS
K ISOLATE FAULTY PA GRID TUNING ASSEMBLY TRANSFORMER
K ISOLATE FAULTY PA GRID TUNING ASSEMBLY INDUCTOR
K ISOLATE FAULTY PA GRID TUNING ASSEMBLY CAPACITOR
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
A LUBE DRIVE MECHANISMS
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0380 A LUBRICATE MECHANICAL PARTS OF GROUND RADIO EQUIPMENT

TASK #: 03550
SYNCHRONIZE URG 208U-3 RF AMPLIFIER UNIT 1A15, 1A16, 1A17, 1A18, DRIVE ASSEMBLIES
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, HANDTOOLS
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0380 4.97 67.0 65.0 57.0 25.0 3.61 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST FOLLOW-ON POTENTIOMETERS
A SYNCHRONIZE DRIVE ASSEMBLIES WITH DRIVEN UNITS
A APPLY OIL
A SYNCHRONIZE MOVEMENT OF TUNING CAPACITOR AND INDUCTOR COIL
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0380 A LUBRICATE MECHANICAL PARTS OF GROUND RADIO EQUIPMENT

TASK #: 03560
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT 1A13 DIRECTIONAL COUPLER AND 1A27 LOW PASS FILTER ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3 OR 5
EQUIPMENT:
WATTMETER, RF SIGNAL GENERATOR, CAPACITOR TESTER, INDUCTOR TESTER, HANDTOOLS, DIGITAL MULTIMETER, SOLDERING KIT, SPECTRUM ANALYZER, INSULATION BREAKDOWN TESTER, BITE MULTIMETER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED DIRECTIONAL COUPLER OR LOW PASS FILTER ASSEMBLY COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY COUPLER/FILTER INDUCTORS
K ISOLATE FAULTY COUPLER/FILTER CAPACITORS
K ISOLATE FAULTY COUPLER/FILTER INSULATORS
K ISOLATE FAULTY COUPLER/FILTER ELECTRONIC SUBSECTION
OF THE DIRECTIONAL COUPLER
K ISOLATE FAULTY COUPLER/FILTER CONNECTIONS
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03570
ALIGN/ADJUST 208U-3 RF AMPLIFIER UNIT 1A137 DIRECTIONAL COUPLER AND 1A27 LOW P
ASS FILTER ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 5
EQUIPMENT:
WATTMETER, RF SIGNAL GENERATOR, BITE WATTMETER
HANDTOOLS,
REFERENCES:
T.O. 31K2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CALIBRATE BITE WATTMETER TO READ THE SAME AS EXTERNAL
WATTMETER
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03580
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT POWER AMPLIFIER COMPARTMENT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 5
EQUIPMENT:
RF SIGNAL GENERATOR, BITE WATTMETER OR WATTMETER, CAPACITOR
ANALYZER, INSULATION BREAKDOWN TESTER, DIGITAL MULTIMETER,
HIGH VOLTAGE PROBE, HANDTOOLS, BITE MULTIMETER, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE,
FAILED POWER AMPLIFIER SUBASSEMBLY COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CONTROL GRID COUPLING NETWORK
K ISOLATE FAULTY OUTPUT COUPLING NETWORKS
K ISOLATE FAULTY POWER AMPLIFIER TUBE
K ISOLATE FAULTY CATHODE DECOUPLING NETWORKS
K ISOLATE FAULTY HEATER CATHODE TRANSFORMER
K ISOLATE FAULTY NEUTRALIZATION NETWORK
K ISOLATE FAULTY FEEDBACK NETWORK
K ISOLATE FAULTY TUBE SOCKET
K ISOLATE FAULTY PLATE DECOUPLING NETWORK
A REMOVE/REPLACE ASS'BLIES, COMPONENTS, AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03590
ALIGN/ADJUST 208U-3 RF AMPLIFIER UNIT POWER AMPLIFIER COMPARTMENT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: WEEKLY OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, BITE WATTMETER OR WATTMETER, RF VOLTMETER,
BITE MULTIMETER, TOOL KIT
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST FILAMENT VOLTAGE
A ALIGN/ADJUST STATIC PLATE CURRENT
A PERFORM RF FEEDBACK CHECK
A ALIGN/ADJUST NEUTRALIZATION
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 ALIGN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT

TASK #: 03600
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT SERVO AMPLIFIERS AND ASSEMBLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3 OR 5
EQUIPMENT:
RF SIGNAL GENERATOR, BITE WATTMETER OR WATTMETER, DIGITAL
MULTIMETER, TRANSISTOR TESTER, CAPACITOR TESTER, OSCILLOSCOPE,
BITE MULTIMETER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ISOLATE FAULTY SERVO AMPLIFIERS BY MONITORING SERVO
MOTOR MOVEMENT
A ISOLATE FAULTY SERVO AMPLIFIER CHOPPERS
A ISOLATE FAULTY CHOPPER POWER SUPPLY
A ISOLATE FAULTY SERVO AMPLIFIER RESISTORS
A ISOLATE FAULTY SERVO AMPLIFIER CAPACITORS
A ISOLATE FAULTY SERVO AMPLIFIER INDUCTORS
A ISOLATE FAULTY SERVO AMPLIFIER TRANSFORMERS
A ISOLATE FAULTY SERVO AMPLIFIER CONNECTORS
A ISOLATE FAULTY SERVO AMPLIFIER INSULATORS OPERATION
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03610
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT METER PANEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: DAILY OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNC REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, CAPACITOR TESTER, INDUCTOR TESTER, RF SIGNAL GENERATOR, BITE WATTMETER OR WATTMETER, OSCILLOSCOPE, BITE MULTIMETER, TUBE TESTER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE,
FAILURE OF METER PANEL COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY METER PANEL COMPONENTS
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03620
ALIGN/ADJUST 208U-3 RF AMPLIFIER UNIT METER PANEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: DAILY OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNC REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DIGITAL MULTIMETER, BITE WATTMETER OR WATTMETER, BITE MULTIMETER, HAND TOOLS
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CALIBRATE PA FILAMENT VOLTMETER
A ZERO METER MOVEMENTS
A CALIBRATE BITE WATTMETER
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03630
TROUBLESHOOT 208U-3 RF AMPLIFIER UNIT 1A22 DIGITAL DISCRIMINATOR
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMIANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): 304X4-31JB THROUGH 304X4-B4Q
ITT: NONE
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, TRANSISTOR TESTER, CAPACITOR TESTER, HAND
TOOLS, SOLDERING KIT, INDUCTOR TESTER, OSCILLOSCOPE, RF SIGNAL
GENERATOR, BITE MULTIMETER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED
DIGITAL DISCRIMINATOR COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY DIGITAL DISCRIMINATOR CIRCUIT CARDS
AND COMPONENT PARTS
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT

TASK #: 03640
ALIGN/ADJUST URG 208U-3 RF AMPLIFIER UNIT 1A22 DIGITAL DISCRIMINATOR
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
ITT: NONE
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, RF SIGNAL GENERATOR, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, DIGITAL
DISCRIMINATOR COMPONENT REPLACEMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST DIGITAL DISCRIMINATOR
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03650
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT 1A14 DETECTOR ASSEMBLY

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: SEMI-ANNUALY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q

TTT: NONE

SME OPINION: 3

EQUIPMENT:

BITE MULTIMETER, RF SIGNAL GENERATOR, CAPACITOR TESTER, INDUCTOR TESTER, INSULATION TESTER, HAND TOOLS, SOLDERING KIT, TUBE TESTER, DIGITAL MULTIMETER

REFERENCES:

T.O. 31R2-4-316-2

CONDITIONS CUES:

COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER

CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED DETECTOR ASSEMBLY COMPONENTS

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H	0378	6.82	63.0	60.0	51.0	28.0	6.44
304X4	J	0541	5.53	62.0	57.0	49.0	25.0	5.16
								18.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY RESISTORS

K ISOLATE FAULTY DETECTOR ASSEMBLY DUAL DIODE VACUUM TUBE

K ISOLATE FAULTY DETECTOR ASSEMBLY CONNECTORS

A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:

4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT

4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03660

TROUBLESHOOT 208U-3 RF AMPLIFIER UNIT PA TUNING COMPONENTS

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: DAILY OR QUARTERLY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q

TTT: NONE

SME OPINION: 3

EQUIPMENT:

RF SIGNAL GENERATOR, BITE WATTMETER, WATTMETER, INSULATION BREAKDOWN TEST SET, HAND TOOLS, DIGITAL MULTIMETER

REFERENCES:

T.O. 31R2-4-316-2

CONDITIONS CUES:

COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X4	H	0378	6.82	63.0	60.0	51.0	28.0	6.44
304X4	J	0541	5.53	62.0	57.0	49.0	25.0	5.16
								18.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY PA TUNING COIL

K ISOLATE FAULTY PA TUNING/LOADING CAPACITORS

K ISOLATE FAULTY LOADING COIL

K ISOLATE FAULTY LOADING COIL SHORTING SWITCHES

K ISOLATE FAULTY MECHANICAL SYNCHRONIZATIONS

K ISOLATE FAULTY MECHANICAL DRIVE COUPLINGS

K ISOLATE FAULTY PARASYTIC SUPPRESSOR

K ISOLATE FAULTY PA TUNING INSULATORS

A REMOVE AND REPLACE COMPONENTS AND PARTS

K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEMBLIES

K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT

4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03670
ALIGN/ADJUST 208U-3 RF AMPLIFIER UNIT PA TUNING COMPONENTS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
HANDTOOLS
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A SYNCHRONIZE PA TUNING COIL WITH ITS DRIVE
A SYNCHRONIZE TUNING CAPACITORS WITH EACH OTHER AND
WITH ITS DRIVE
A SYNCHRONIZE PA LOADING COIL ROLLERS TO ITS DRIVE
A SYNCHRONIZE PA LOADING COIL SHORTING SWITCHES TO ITS
DRIVE
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEM-
BLIES
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03680
ALIGN/ADJUST URG 208U-3 LINEAR POWER AMPLIFIER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY, WEEKLY, OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DIGITAL MULTIMETER, BITE MULTIMETER,
BITE WATTMETER, WATTMETER, OSCILLOSCOPE, RF VOLTMETER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, USERS PATCHED OFF,
SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST TUNING POWER
A ALIGN/ADJUST REFLECTIVE POWER OVERLOAD CIRCUIT
A ALIGN/ADJUST COURSE TUNING DIGITAL DISCRIMINATOR AT
SPECIFIC RADIO FREQUENCIES
A SYNCHRONIZE MOVEMENT OF TUNING CAPACITOR AND INDUCTOR
COIL
A ADJUST FOLLOW-ON POTENTIOMETERS
A SYNCHRONIZE DRIVE ASSEMBLIES WITH DRIVEN UNITS
A ALIGN/ADJUST FILAMENT VOLTAGE
A ALIGN/ADJUST STATIC PLATE CURRENT
A ALIGN/ADJUST RF FEEDBACK CHECK
A ALIGN/ADJUST NEUTRALIZATION
A CALIBRATE PA GRID RF VOLTMETER
A ALIGN/ADJUST LOADING COMPARATOR
A ALIGN/ADJUST AUTOMATIC LOAD CONTROL
A ZERO METER MOVEMENTS
A ALIGN/ADJUST AUTOMATIC DISIPATION LIMITER
A ALIGN/ADJUST INPUT AMPLIFIER PLATE CURRENTS
A ALIGN/ADJUST DRIVER STATIC PLATE CURRENTS
A ALIGN/ADJUST POWER AMPLIFIER PLATE CURRENT
A CALIBRATE BITE WATTMETER
A SYNCHRONIZE PA TUNING COIL WITH ITS DRIVE
A SYNCHRONIZE TUNING CAPACITORS WITH ITS DRIVE
A SYNCHRONIZE PA LOADING COIL ROLLERS TO ITS DRIVE
A SYNCHRONIZE PA LOADING COIL SHORTING SWITCHES TO ITS
DRIVE
A ALIGN/ADJUST TRANSMIT GAIN CONTROL
A MONITOR BEHAVIOR OF PA FINE TUNE PHASE DETECTOR HIGH
FREQUENCY COMPENSATION ADJUSTMENT
A ALIGN/ADJUST PA GRID FINE TUNE PHASE DETECTOR HF
FREQUENCY COMPENSATION
K APPLY THEORY OF OPERATION OF ELECTROMECHANICAL ASSEM-
BLIES
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03690
INSPECT URG 208U-3 POWER SUPPLY UNIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY, 7, 14, 28, 56, 84, 168, 336
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: 3
SME OPINION: 3
EQUIPMENT:
VACUUM CLEANER, GENERAL PURPOSE CLEANER, HAND TOOLS, PAINT BRUSH,
LOW PRESSURE AIR SOURCE, BITE MULTIMETER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R2-4-316-6WC-1
T.O. 31Z1-6-6WC-2 (TRANSMITTER/GCCS)
CONDITIONS CUES:
COND: SYSTEM OUT OF SERVICE, PATCH OFF USERS, SAFETY OBSERVER
CUE: PMI, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A PERFORM FRONT PANEL POWER SUPPLY BITE METER OPERATIONAL CHECKS
A PERFORM TURN-ON/TURN-OFF PROCEDURES
A PERFORM CORROSION CONTROL PROCEDURES
A PERFORM INTERLOCK AND SHORTING SWITCH TEST
A CHECK VARIABLE TRANSFORMER BRUSH
A CLEAN INTERIOR/EXTERIOR OF CABINET AND EQUIPMENT
A LUBE TRANSMITTER BLOWER MOTOR
A CHECK BITE METER READINGS (-2 T.O.)
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE ELECTRICAL EQUIPMENT
K APPLY THEORY OF OPERATION OF VACUUM TUBE LIMITER CIRCUITS
K RECOGNIZE PROPER OPERATION OR MALFUNCTION OF INTERLOCK SWITCHES OR SHORTING SWITCHES
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03700
TROUBLESHOOT URG 208U-3 POWER SUPPLY UNIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY OR QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
BITE MULTIMETER, DIGITAL MULTIMETER, HIGH VOLTAGE PROBE, HAND TOOLS
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: EQUIPMENT ON CABINET, USERS PATCHED OFF, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0378 6.82 63.0 60.0 51.0 28.0 6.44 18.0
304X4 J 0541 5.53 62.0 57.0 49.0 25.0 5.16 18.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY 28 VOLT POWER SUPPLY
K ISOLATE FAULTY 1A3 PA BIAS SUPPLY
K ISOLATE FAULTY 1A2 DRIVER POWER SUPPLY
K ISOLATE FAULTY PA POWER CONTROL CIRCUITS
K ISOLATE FAULTY PA INTERLOCK CIRCUITS
K ISOLATE FAULTY 1A7 PA INPUT VOLTAGE REGULATOR
K ISOLATE FAULTY 3250 VOLT/800 VOLT POWER SUPPLIES
K ISOLATE FAULTY 1A7 LOCAL CONTROL PANEL
K ISOLATE FAULTY PA CATHODE/SCREE CURRENT
K ISOLATE FAULTY 1A3 BIAS AND KEYER SUPPLY
K ISOLATE FAULTY OVERLOAD RECYCLE TIMER
A REMOVE AND REPLACE SUBASSEMBLIES
A REMOVE AND REPLACE COMPONENTS AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

4 H0378 K ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY
(UHF) EQUIPMENT
4 J0541 A REMOVE OR INSTALL UHF EQUIPMENT PARTS

TASK #: 03710

TROUBLESHOOT URG 208U-3 POWER SUPPLY UNIT 28 VOLT POWER SUPPLY

DUTY CODE: X4

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: MONTHLY OR SEMI-ANNUALLY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q

TTT: NONE

SME OPINION: 3

EQUIPMENT:

DIGITAL MULTIMETER, BITE MULTIMETER, HAND TOOLS, SOLDERING KIT

REFERENCES:

T.O. 31R2-4-316-2

CONDITIONS CUES:

COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER

CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED
28 VOLT POWER SUPPLY COMPONENTS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.6 4.98 12.0

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY 28 VOLT POWER SUPPLY TRANSFORMER
K ISOLATE FAULTY SUPPLY BRIDGE RECTIFIER
K ISOLATE FAULTY FILTER CHOKE
K ISOLATE FAULTY 28 VOLT POWER SUPPLY FUSES
A REMOVE AND REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT

OSR JOB INVENTORY TASK STATEMENTS:

4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DIS-
CRETE PARTS

TASK #: 03720
TROUBLESHOOT URG 208U-3 POWER SUPPLY UNIT 1A3 BIAS KEYERPOWER SUPPLY
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY, QUARTERLY, OR ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
BITE MULTIMETER, DIGITAL MULTIMETER, HAND TOOLS, SOLDERING KIT,
TUBE TESTER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED
PA BIAS POWER SUPPLY COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0518 5.30 43.0 42.0 41.0 20.0 5.34 12.0
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY BIAS SUPPLY COMPONENTS AND PARTS
K ISOLATE FAULTY BIAS SUPPLY ELECTRON TUBE
A REMOVE/REPLACE BIAS SUPPLY ASSEMBLIES, COMPONENTS,
AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0518 A BENCH CHECK POWER SUPPLY EQUIPMENT
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DIS-
CRETE PARTS

TASK #: 03730
TROUBLESHOOT URG 208U-3 POWER SUPPLY UNIT PA POWER CONTROL AND INTERLOCK CIRCUITS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, HAND TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER OF/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE, FAILED
POWER CONTROL CIRCUIT COMPONENTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K APPLY THEORY OF OPERATION OF ELECTRICAL SWITCHES
K ISOLATE FAULTY ELECTRICAL SWITCHES
K TROUBLESHOOT ELECTRICAL SWITCHES
K ISOLATE FAULTY FUSES
K ISOLATE FAULTY TIME DELAY CIRCUITS
K ISOLATE FAULTY INDICATOR LAMP CIRCUITS
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DIS-
CRETE PARTS

TASK #: 03740
TROUBLESHOOT URG 208U-3 POWER SUPPLY UNIT A7 AUTOMATIC INPUT VOLTAGE REGULATOR
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY, QUARTERLY, OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, SOLDERING KIT, HAND TOOLS
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0537 4.73 42.0 44.0 41.0 20.0 4.81 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY TRANSFORMERS
K ISOLATE FAULTY REGULATOR TRANSFORMER
K ISOLATE FAULTY REGULATOR DRIVE MOTOR
K ISOLATE FAULTY VARIABLE POWER TRANSFORMER
K ISOLATE FAULTY BUCK-BOOST TRANSFORMER
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0537 A REMOVE OR INSTALL POWER SUPPLY EQUIPMENT PARTS

TASK #: 03750
ALIGN/ADJUST URG 208U-3 POWER SUPPLY UNIT 1A7 AUTOMATIC INPUT VOLTAGE REGULATOR
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: 3
SME OPINION: 3
EQUIPMENT:
HANDTOOLS, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE,
FILAMENT VOLTAGE REGULATOR COMPONENT FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST INPUT VOLTAGE CONTROL RANGE
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN UHF EQUIPMENT

TASK #: 03760
TROUBLESHOOT URG 208U-3 RF AMPLIFIER UNIT 1A2 DRIVER POWER SUPPLY UNIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, BITE MULTIMETER, ZENER DIODE TESTER, HAND
TOOLS, CAPACITOR TESTER, INDUCTOR TESTER, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET/BENCH, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0518 5.30 43.0 42.0 41.0 20.0 5.34 12.0
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY VARISTORS
K ISOLATE FAULTY DRIVER POWER VARISTOR
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0518 A BENCH CHECK POWER SUPPLY EQUIPMENT
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DIS-
CRETE PARTS

TASK #: 03770
TROUBLESHOOT URG 208U-3 POWER SUPPLY UNIT +3250 VOLT/-1250 VOLT DC POWER SUPPL
Y
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
BITE MULTIMETER, DIGITAL MULTIMETER, HIGH VOLTAGE PROBE, HAND
TOOLS, SOLDERING KIT
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY POWER TRANSFORMER
K ISOLATE FAULTY POWER SUPPLY FILTER CHOKES
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DIS-
CRETE PARTS

TASK #: 03780
TROUBLESHOOT URG 208U-3 POWER SUPPLY UNIT PA CATHODE SCREEN/CURRENT AND OVERLOAD RECYCLE TIMER CIRCUIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: NONE
SME OPINION: 3
EQUIPMENT:
BITE MULTIMETER, BITE WATTMETER, TRANSISTOR TESTER, HAND TOOLS,
SOLDERING KIT, CAPACITOR TESTER, PORTABLE POWER SUPPLIES
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER ON/OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, TRANSMITTER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0593 3.67 32.0 31.0 30.0 13.0 4.98 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY COMPONENTS AND PARTS
A REMOVE/REPLACE ASSEMBLIES, COMPONENTS, AND PARTS
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 K0593 A REMOVE OR INSTALL EQUIPMENT POWER SUPPLY UNIT DISCRETE PARTS

TASK #: 03790
ALIGN/ADJUST URG 208U-3 POWER SUPPLY UNIT PA CATHODE SCREEN/CURRENT AND OVERLOAD RECYCLE TIMER CIRCUIT
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X4-31JB THROUGH 304X4-B4Q
TTT: 3
SME OPINION: 3
EQUIPMENT:
HAND TOOLS, PORTABLE POWER SUPPLIES
REFERENCES:
T.O. 31R2-4-316-2
CONDITIONS CUES:
COND: POWER OFF, EQUIPMENT ON CABINET, SAFETY OBSERVER
CUE: PMI FINDING, USER COMPLAINT, FAILURE OF PLATE CURRENT
OVERLOAD CIRCUIT COMPONENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0499 6.78 63.0 60.0 51.0 26.0 6.13 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST PA PLATE CURRENT OVERLOAD THRESHOLD
K APPLY TRANSISTOR CONTROLLED RELAY CIRCUIT THEORY OF
OPERATION
K OBSERVE MAINTENANCE PRECAUTIONS OF HIGH VOLTAGE
ELECTRICAL EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
4 J0499 A ALIGN ULTRA HIGH FREQUENCY (UHF) EQUIPMENT

TASK #: 03800
INSPECT 618T-1 RECEIVER-TRANSMITTER RADIO
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: 28, 56
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2, T.O. 12R2-4-42-4, AND
T.O. 12R2-2MRC108-2
TTT: NONE
SME OPINION: NONE T.O. 31R2-2MRC108-2 (SPECIFIES PMI FOR MRC-108
EQUIPMENT:
AC VTVM, VOM, DC VOLTAGE DIVIDER, PROBE COAXIAL T-CONNECTOR,
RF VTVM, DIGITAL MULTIMETER, AUDIO OUTPUT METER,
SIGNAL GENERATOR, AUDIO OSCILLATOR, ATTENUATOR 6-DB, TORQUE
METER, FREQUENCY COUNTER, OSCILLOSCOPE, TRANSISTOR TESTER,
PREAMPLIFIER, SPECTRUM ANALYZER, VARIABLE VOLTAGE DC POWER
SUPPLY ELECTRICAL DUMMY LOAD, MAINTENANCE KIT (COLLINS 678Y-1/3),
FUNCTIONS TEST SET (COLLINS 678Z-1), RADIO TEST HARNESS (COLLINS
678P-12, TIMEPIECE WITH SECOND COUNTER, DECADE CAPACITOR,
COMMON HANDTOOLS
REFERENCES:
T.O. 12R2-4-42-2
T.O. 12R2-4-42-4
T.O. 31R2-2MRC108-2 (SPECIFIES PMI FOR MRC-108 SYSTEMS)
CONDITIONS CUES:
COND: INDOORS IN SHOP, UNDER FIELD CONDITIONS
CUE: PMI IN CONJUNCTION WITH MRC 108
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0391 5.47 42.0 43.0 40.0 21.0 4.29 12.0
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM POSITIVE 18 VOLT CHECK
A PERFORM RF OSCILLATOR CHECK
A PERFORM MHZ FREQUENCY STABILIZER CHECK
A PERFORM VFO TRACKING CHECK
A PERFORM VFO CAPTURE RANGE CHECK
A PERFORM DIGIT OSCILLATOR CHECK
A PERFORM RECEIVER TESTS
A PERFORM AM GAIN AND SENSITIVITY TEST
A ADJUST AUDIO AMPLIFIER ADJUSTMENT
A PERFORM SSB GAIN AND SENSITIVITY TEST
A PERFORM AGC CHARACTERISTICS TEST
A PERFORM SELECTIVITY TEST
A PERFORM AUDIO DISTORTION TEST
A PERFORM AM POWER OUTPUT TEST
A PERFORM RESIDUAL OUTPUT VOLTAGE TEST
A PERFORM SINGLE SIDEBAND OUTPUT POWER TEST
A PERFORM FREQUENCY ACCURACY TEST
A PERFORM MODULATION CAPABILITY TEST
A PERFORM CW OUTPUT TEST
A PERFORM SIDETONE OPERATION TEST
A ADJUST TRANSMIT GAIN CONTROL (TGC)
A PERFORM POSITIVE 260 VOLTS DC OUTPUT TEST
A PERFORM 115 VOLT 400 HZ OUTPUT TEST
A PERFORM POSITIVE 27.5 VOLT DC OUTPUT TEST
A PERFORM CHOPPER ENABLE TEST
A PERFORM RECYCLE LINE OUTPUT TEST
A PERFORM TUNE POWER CHECK
A ADJUST RECEIVE AUDIO OUTPUT
A ADJUST SIDE TONE OUTPUT LEVEL ADJUSTMENT
A PERFORM POWER SUPPLY AND POWER AMPLIFIER CURRENT
PLATE CHECK
OSR JOB INVENTORY TASK STATEMENTS:
4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

TASK #: 03810
TROUBLESHOOT 618T-1 RECEIVER-TRANSMITTER RADIO/PARTS
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2 AND T.O. 12R2-4-42-4
TTT: 5
SME OPINION: 5
EQUIPMENT:
AC VTVM, VOM, DC VOLTAGE DIVIDER, PROBE COAXIAL T-CONNECTOR,
RF VTVM, AUDIO OUTPUT METER, TRANSISTOR TESTER,
SIGNAL GENERATOR, AUDIO OSCILLATOR, ATTENUATOR 6-DB, TORQUE
METER, FREQUENCY COUNTER, OSCILLOSCOPE, DIGITAL MULTIMETER
PREAMPLIFIER, SPECTRUM ANALYZER, VARIABLE VOLTAGE DC POWER
SUPPLY ELECTRICAL DUMMY LOAD, MAINTENANCE KIT (COLLINS 678Y-1/3),
FUNCTIONS TEST SET (COLLINS 678Z-1), RADIO TEST HARNESS (COLLINS
678P-12, TIMEPIECE WITH SECOND COUNTER, DECADE CAPACITOR
SOLDERING KIT, HANDTOOLS
REFERENCES:
T.O. 12R2-4-42-2
T.O. 12R2-4-42-4
CONDITIONS CUES:
COND: INDOORS, UNDER FIELD CONDITIONS
CUE: PMI FINDING, MODULE MALFUNCTIONS, UNDER OPERATION OF
RECEIVER-TRANSMITTER, CHASSIS COMPONENT/PARTS FAILURE
JOB STANDARDS:
IAW REFERENCES
GSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0505 6.23 28.0 31.0 32.0 17.0 5.65 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY FREQUENCY DIVIDER A1
K ISOLATE FAULTY RF OSCILLATOR A2
K ISOLATE FAULTY IF TRANSLATOR A3
K ISOLATE FAULTY KILOCYCLE-FREQUENCY STABILIZER A4
K ISOLATE FAULTY LOW-VOLTAGE POWER SUPPLY A5
K ISOLATE FAULTY ELECTRONIC CONTROL AMPLIFIER A6
K ISOLATE FAULTY AM/AUDIO AMPLIFIER A9
K ISOLATE FAULTY MEGACYCLE-FREQUENCY STABILIZER
K ISOLATE FAULTY CHASSIS COMPONENTS AND PARTS
K ISOLATE FAULTY RF OSCILLATOR A2
K ISOLATE FAULTY IF TRANSLATOR A3
K ISOLATE FAULTY KILOCYCLE-FREQUENCY STABILIZER A4
K ISOLATE FAULTY LOW-VOLTAGE POWER SUPPLY A5
K ISOLATE FAULTY ELECTRONIC CONTROL AMPLIFIER A6
K ISOLATE FAULTY AM/AUDIO AMPLIFIER A9
K ISOLATE FAULTY MEGACYCLE-FREQUENCY STABILIZER
A REMOVE/REPLACE FREQUENCY DIVIDER A1
A REMOVE/REPLACE CHASSIS COMPONENTS AND PARTS
S USE MAINTENANCE KIT (COLLINS 678Y-1/3)
S USE HEAT SHRINK MATERIAL ON SEMICONDUCTOR COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0505 A BENCH CHECK HF RECEIVERS

TASK #: 03820
ALIGN/ADJUST 618T-1 RECEIVER-TRANSMITTER RADIO
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMIANNNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
AC VTVM, VOM, DC VOLTAGE DIVIDER, PROBE COAXIAL T-CONNECTOR,
RF VTVM, AUDIO OUTPUT METER, TRANSISTOR TESTER,
SIGNAL GENERATOR, AUDIO OSCILLATOR, ATTENUATOR 6-DB, TORQUE
METER, FREQUENCY COUNTER, OSCILLOSCOPE, DIGITAL MULTIMETER
PREAMPLIFIER, SPECTRUM ANALYZER, VARIABLE VOLTAGE DC POWER
SUPPLY ELECTRICAL DUMMY LOAD, MAINTENANCE KIT (COLLINS 678Y-1/3),
FUNCTIONS TEST SET (COLLINS 678Z-1), RADIO TEST HARNESS (COLLINS
678P-12), TIMEPIECE WITH SECOND COUNTER, DECADE CAPACITOR,
HANDTOOLS
REFERENCES:
T.O. 12R2-4-42-2
CONDITIONS CUES:
COND: INDOORS, UNDER FIELD CONDITIONS
CUE: PHM FINDING, MODULE OR CHASSIS FAILURE, OUT OF TOLERANCE
CONDITION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST FREQUENCY DIVIDER A1
A ALIGN/ADJUST RF OSCILLATOR A2
A ALIGN/ADJUST IF TRANSLATOR A3
A ALIGN/ADJUST KILOCYCLE-FREQUENCY STABILIZER A4
A ALIGN/ADJUST LOW-VOLTAGE POWER SUPPLY A5
A ALIGN/ADJUST AM/AUDIO AMPLIFIER A9
A ALIGN/ADJUST MEGACYCLE-FREQUENCY STABILIZER A10
A ALIGN/ADJUST POWER AMPLIFIER A-11
A ALIGN/ADJUST RF TRANSLATOR A12
OSR JOB INVENTORY TASK STATEMENTS:
4 J0497 A ALIGN SIDE BAND EQUIPMENT

TASK #: 03830
TROUBLESHOOT 618T-1 RECEIVER-TRANSMITTER RADIO POWER AMPLIFIER A11
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMIANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
AC VTVM, VOM
REFERENCES:
T.O. 12R2-4-42-2
CONDITIONS CUES:
COND: INDOORS, FIELD CONDITIONS
CUE: FAILED POWER AMPLIFIER A11 MODULE SECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0377 6.07 43.0 44.0 41.0 20.0 6.55 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
K ISOLATE FAULTY PEAK ENVELOPE POWER LIMITER CIRCUIT
A REMOVE AND REPLACE SUBASSEMBLIES, COMPONENTS, AND PARTS
K INTERPRET TEST DATA FOR INDICATIONS OF FAULTS IN
OTHER RECEIVER-TRANSMITTER MODULES
OSR JOB INVENTORY TASK STATEMENTS:
4 H0377 K ISOLATE MALFUNCTIONS WITHIN SIDE BAND EQUIPMENT
4 H0377 K ISOLATE MALFUNCTIONS WITHIN SIDE BAND EQUIPMENT

TASK #: 03840
ALIGN/ADJUST 618T-1 RECEIVER-TRANSMITTER RADIO POWER AMPLIFIER A11
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
AC VTVM, VOM
REFERENCES:
T.O. 12R2-4-42-2
CONDITIONS CUES:
COND: INDOORS, UNDER FIELD CONDITIONS, 2 MAN TEAM
CUE: OUT OF TOLERANCE CONDITION, REPLACED COMPONENT, POWER
AMPLIFIER FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST PEAK ENVELOPE POWER CIRCUIT
A ALIGN/ADJUST TRANSMIT GAIN CONTROL (TGC)
OSR JOB INVENTORY TASK STATEMENTS:
4 J0497 A ALIGN SIDE BAND EQUIPMENT

TASK #: 03850
INSPECT 618T-1 RECEIVER-TRANSMITTER RADIO RF TRANSLATOR A12
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2
TTT: NONE
SME OPINION: 3
EQUIPMENT:
HANDTOOLS
REFERENCES:
T.O. 12R2-4-42-2
CONDITIONS CUES:
COND: INDOORS, UNDER FIELD CONDITIONS, 2 MAN TEAM
CUE: PMI FINDING, UNDER OPERATING CONDITIONS, MODULE FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
304X4 H 0391 5.47 42.0 43.0 40.0 21.0 4.29 12.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT GEARS AND COUPLINGS VISUALLY FOR ENGAGEMENT
A CHECK INSTALLATION OF TUBE SHIELDS AND COVERS IN
MODULE
A INSPECT TUBES VISUALLY FOR OBVIOUS DEFECTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT
4 H0391 A OPERATIONALLY CHECK SIDE BAND EQUIPMENT

TASK #: 03960
TROUBLESHOOT 618T-1 RECEIVER-TRANSMITTER RADIO RF TRANSLATOR A12
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, MAINTENANCE KIT (COLLINS 678Y-1/3), FREQUENCY COUNTER, SIGNAL GENERATOR, AC VTVM, RF VTVM, RADIO SET TEST HARNESS (COLLINS 678P-1/2), TUBE PULLER, SOLDERING KIT, HANDTOOLS, ANALOG MULTIMETER
REFERENCES:
T.O. 12R2-4-42-2
CONDITIONS CUES:
COND: INDOORS, UNDER FIELD CONDITIONS, 2 MAN TEAM
CUE: PMI FINDING, UNDER OPERATING CONDITIONS, FAILED MODULE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 G 0340 2.12 3.0 2.0 1.0 1.0 4.94 2.0
ACTIVITIES SKILL KNOWLEDGE:
A ISOLATE FAULTY VFO OUTPUT LEVEL
A ISOLATE FAULTY 17.5-MC OSCILLATOR
A ISOLATE FAULTY BAND-PASS FILTER OUTPUT AND TRANSMIT MODE
A ISOLATE FAULTY HF OSCILLATOR OUTPUT
A ISOLATE FAULTY SIGNAL LEVEL AT RF AMPLIFIER GRID DURING TRANSMIT
A ISOLATE FAULTY SIGNAL LEVEL AT DRIVER GRID DURING TRANSMIT
A ISOLATE FAULTY VFO TRACKING ACCURACY
A ISOLATE FAULTY VFO PHASE LOCK
A ISOLATE FAULTY PHASE LOCKING CAPABILITY OF 17.5-MC OSCILLATOR
A ISOLATE FAULTY PHASE LOCKING CAPABILITY OF HF OSCILLATOR
A ISOLATE FAULTY RECEIVE/TRANSMIT GAIN
A ISOLATE FAULTY TRANSMIT GAIN
A ISOLATE FAULTY TRANSMIT SPURIOUS RESPONSE
A ISOLATE FAULTY TRANSMIT MIXER BALANCE
A ISOLATE FAULTY VARIABLE IF AND BAND-PASS IF
A REMOVE AND REPLACE COMPONENTS
A REMOVE AND REPLACE PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 G0340 A INSTALL SINGLE CHANNEL SIDE BAND RECEIVERS

TASK #: 03870
ALIGN/ADJUST 618T-1 RECEIVER-TRANSMITTER RADIO RF TRANSLATOR A12
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-4-42-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, MAINTENANCE KIT (COLLINS 678Y-1/3), FREQUENCY COUNTER, SIGNAL GENERATOR, AC VTVM, RF VTVM, RADIO SET TEST HARNESS (COLLINS 678P-1/2), FUNCTIONS TEST SET (COLLINS 678Z-1), TUBE TESTER, ANALOG MULTIMETER, HANDTOOLS
REFERENCES:
T.O. 12R2-4-42-2
CONDITIONS CUES:
COND: INDOORS, UNDER FIELD CONDITIONS, 2 MAN TEAM
CUE: PMI FINDING, FAILED MODULE, UNDER OPERATION OF RADIO
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
304X4 J 0497 5.97 41.0 43.0 39.0 21.0 6.38 12.0
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST VFO OUTPUT LEVEL
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 03880
INSPECT 635W-1 HARMONIC FILTER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 7, 14, 56, 168, 336
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-382-6WC1-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DUMMY LOAD
REFERENCES:
T.O. 31R2-4-382-6WC-1
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN CABINET AIR FILTER
A CHECK HARMONIC FILTER TRACKING COMPATIBILITY AND
ADJUST PER T.O.
A LUBRICATE MECHANICAL COMPONENTS
A REPLACE CABINET AIR FILTER
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03890
ALIGN 635W-1 HARMONIC FILTER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: TWO MONTHS
OJT TRAINABLE: YES, NO, THEORY OF TRANSMIT POWER OPERATION,
INDUCTOR CAPACITOR CIRCUITS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-382-2
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, DUMMY LOAD, 208U-10 LINEAR POWER AMPLIFIER
REFERENCES:
T.O. 31R2-4-382-2
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: HIGH REVERSE POWER, LEVEL (RADIO SYSTEM) WILL NOT TUNE OR
REQUIRES EXCESSIVE TIME TO TUNE, FAULT INDICATION ON 914J-4
CONTROL HEAD
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK LOW END OF FOLLOW UP POTENTIOMETER AND ADJUST
PER T.O.
A CHECK MECHANICAL ALIGNMENT OF HARMONIC FILTER INDUC-
TORS AND
A ADJUST POTENTIOMETER PER T.O.
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 03900
TROUBLESHOOT 635W-1 HARMONIC FILTER TO DISCREET COMPONENT LEVEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: TWO MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, SAFETY PROCEDURES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-382-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
RF SIGNAL GENERATOR, RF VOLTMETER, DIGITAL MULTIMETER, DUMMY
LOAD, CAPACITOR CHECKER, HANDTOOLS, SOLDERING KIT
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: HIGH REVERSE POWER, LEVEL (RADIO SYSTEM) WILL NOT TUNE OR
REQUIRES EXCESSIVE TIME TO TUNE, FAULT INDICATION ON 914J-4
CONTROL HEAD, VISIBLE DAMAGE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK FOR VISIBLE MECHANICAL MALFUNCTION
K ISOLATE FAULT TO DISCREET COMPONENT
A REMOVE AND REPLACE COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT

TASK #: 03910
INSPECT 651G-1 RECEIVER FILTER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 14, 28, 56, 336
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, FILTER THEORY OF OPERATION
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-311-6WC-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, FREQUENCY COUNTER, RF VOLTMETER, ATTENUATOR
REFERENCES:
T.O. 31R2-4-311-6WC-1
CONDITIONS CUES:
COND: ON EQUIPMENT, REST OF RADIO SYSTEM BYPASSED
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK RECEIVER FILTER GAIN AND SENSITIVITY AND ADJUST PER T.O.
A CHECK RECEIVER FILTER BAND PASS AND ADJUST PER T.O.
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03920
TROUBLESHOOT 651G-1 RECEIVER FILTER TO DISCREET COMPONENT LEVEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: ONE MONTH, THREE MONTHS
OJT TRAINABLE: YES, NO, THEORY OF FILTER CIRCUIT OPERATION,
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-304-2 AND T.O. 31R2-4-304-11
TTT: 5
SME OPINION: 5
EQUIPMENT:
RF SIGNAL GENERATOR, FREQUENCY COUNTER, RF VOLTMETER,
DIGITAL MULTIMETER, ANALOG MULTIMETER, SOLDERING EQUIPMENT,
HANDTOOLS
REFERENCES:
T.O. 31R2-4-304-2
T.O. 31R2-4-304-11
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: NO RECEIVE SIGNAL, NO RECEIVE WITHIN A CERTAIN BANDWIDTH,
WEAK RECEIVE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SUBASSEMBLIES
K ISOLATE FAULTY CIRCUITS AND COMPONENTS
K REMOVE AND REPLACE COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS

TASK #: 03930
ALIGN 651G-1 RECEIVER FILTER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: ONE MONTH
OJT TRAINABLE: YES, NO, THEORY OF ELECTRON TUBE OPERATION
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-304-2
TTT: 3
SME OPINION: 3
EQUIPMENT:
RF SIGNAL GENERATOR, FREQUENCY COUNTER, RF VOLTMETER, ATTENUATOR
REFERENCES:
T.O. 31R2-4-304-2
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: WEAK RECEIVE SIGNAL, OPERATOR COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST 651G-1 RECEIVER FILTER BANDS FOR MAXIMUM
OUTPUT
A ADJUST ON-FREQUENCY PROTECTION CIRCUIT THRESHOLD
A ADJUST OFF-FREQUENCY PROTECTION CIRCUIT THRESHOLD
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 03940
INSPECT 671B-1 RECEIVER/EXCITER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: 7, 14, 28, 56, 84
OJT TRAINABLE: YES, NO, SYSTEM KNOWLEDGE
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-426-6WC-1 AND PCD CEMI 600-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, RMS VOLTMETER, VTVM, AUDIO OSCILLATOR,
BRIDGING TRANSFORMER, HF SIGNAL GENERATOR, AC PROBE, RF
ATTENUATOR, OSCILLOSCOPE, RF DUMMY LOAD, POWER SUPPLY, FREQUENCY
COUNTER, 971X-1 TEST SET, SPECTRUM ANALYZER, TONE GENERATOR,
DISTORTION ANALYZER
REFERENCES:
T.O. 31R2-4-426-6WC-1
PCD CEMI 600-1
CONDITIONS CUES:
COND: IN SHOP
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0383 5.95 60.0 63.0 60.0 35.0 4.19 18.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK RECEIVER GAIN
A CHECK TRANSMITTER GAIN CONTROL CIRCUIT RF OUTPUT
A CHECK INTERMEDIATE FREQUENCY (IF) TRANSLATOR IF
OUTPUT
A CHECK INDICATOR LIGHT OPERATION
A CHECK RECEIVER AUDIO FREQUENCY TRANSLATION ACCURACY
A CHECK AUDIO RECEIVE DISTORTION
A CHECK AUTOMATIC GAIN CONTROL AND AUDIO LEVEL LIMITING
A CHECK TRANSMITTER FREQUENCY ACCURACY
A CLEAN INTERIOR/EXTERIOR OF EQUIPMENT AND FILTERS
OSR JOB INVENTORY TASK STATEMENTS:
4 H0383 A OPERATIONALLY CHECK HF EQUIPMENT

TASK #: 03950
ALIGN 671B-1 RECEIVER/EXCITER
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: ONE MONTH
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BLOCK DIAGRAMS, SYSTEM KNOWLEDGE
QTP ADEQUATE: NONE
TNG REFERENCE(S): PCD CEMI 600-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
AC DIFFERENTIAL VOLTMETER, FREQUENCY COUNTER, AC VTVM, DC VTVM,
OSCILLOSCOPE, RF VTVM, 979X-1 TEST SET
REFERENCES:
PCD CEMI 600-1
CONDITIONS CUES:
COND: IN SHOP
CUE: TRANSMITTER OFF FREQUENCY, USER COMPLAINT, NO RECEIVE/TRANSMIT, LOW RF LEVEL, NO PEAK POWER OUT,
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0491 6.47 57.0 59.0 56.0 29.0 5.96 18.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST 618Z VOLTAGE REGULATOR OUTPUT VOLTAGE
A ADJUST 618Z RF OSCILLATOR OUTPUT FREQUENCY AND ACCURACY
A ADJUST 789X-1 AUDIO AMPLIFIER GAIN
A ADJUST 789X-1 DUAL BALANCE MODULATOR AUDIO OUTPUT
A ADJUST 789X-1 SIGNAL CONTROL MODULE AUDIO OUTPUT, SIGNAL COMPRESSION
A COMPARE 789X-1 SIGNAL CONTROL MODULE BIAS VOLTAGE VARIANCE TO THE 618Z RF OUTPUT VARIANCE
A ADJUST 789X-1 SIGNAL CONTROL MODULE BIAS VOLTAGE
A CHECK 789X-1 AMPLIFIER CONVERTER T MODULE IF GAIN OUTPUT
A CHECK 789X-1 TRANSMIT GAIN CONTROL THRESHOLD
A CHECK 789X-1 TRANSMIT GAIN CONTROL DOWN COUNT
A ADJUST 789X-1 TRANSMIT GAIN CONTROL THRESHOLD
A CHECK 789X-1 AUDIO OUTPUT FREQUENCY
A CHECK 789X-1 AMPLIFIER CONVERTER R AUDIO OUTPUT LEVEL
A ADJUST 789X-1 AMPLIFIER CONVERTER R GAIN
A CHECK 789X-1 SENSITIVITY
A CHECK RF OSCILLATOR AND FREQUENCY STABILIZER MODULES FOR FREQUENCY STABILIZATION
A ADJUST 789X-1 RF OSCILLATOR MODULE FREQUENCY
A CHECK 618Z RF OSCILLATOR OUTPUT FREQUENCY WITH 789X-1 INPUT
A CHECK 789X-1 AUDIO OUTPUT FREQUENCY WITH 618Z INPUT
A CHECK COMBINED 618Z AND 789X-1 NOISE OUTPUT
A CHECK 789X-1 AUTOMATIC GAIN CONTROL THRESHOLD
A ADJUST DUAL AF AMPLIFIER THRESHOLD
OSR JOB INVENTORY TASK STATEMENTS:
4 J0491 A ALIGN HIGH FREQUENCY (HF) EQUIPMENT

TASK #: 03960
TROUBLESHOOT 671B-1 RECEIVER/EXCITER TO SUBASSEMBLY LEVEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: ONE MONTH
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-426-2
TTT: 5
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, AC VTVM, DC VTVM, SIGNAL GENERATOR, BRIDGING
TRANSFORMER, DISTORTION ANALYZER, DIGITAL MULTIMETER,
OSCILLOSCOPE, RF VTVM, 979X-1 TEST SET
CONDITIONS CUES:
COND: IN SHOP
CUE: NO OUTPUT, FREQUENCY OUTPUT OFF, USER COMPLAINT, NO
RECEIVE/TRANSMIT, LOW RF LEVEL, NO PEAK POWER OUT,
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
ACTIVITIES SKILL KNOWLEDGE:
A CHECK 789X-1 IF OUTPUT
K ISOLATE FAULT TO 789X-1 OR 618Z BOXES
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT

TASK #: 03970
TROUBLESHOOT 671B-1 TRANSLATOR AND IF TRANSLATOR TO CIRCUIT CARD OR MODULE LEVEL
EL OR COMPONENT LEVEL
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: ONE MONTH
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-195-51
TTT: 5
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, AC VTVM, DC VTVM, SIGNAL GENERATOR, BRIDGING
TRANSFORMER, DISTORTION ANALYZER, OSCILLOSCOPE, RF VTVM,
979X-1 TEST SET
REFERENCES:
T.O. 31R2-4-195-51
CONDITIONS CUES:
COND: IN SHOP
CUE: NO OUTPUT, FREQUENCY OUTPUT OFF, USER COMPLAINT, NO
RECEIVE/TRANSMIT, LOW RF LEVEL, NO PEAK POWER OUT,
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 H 0373 6.45 56.0 60.0 57.0 30.0 6.48 18.0
304X4 H 0377 6.07 43.0 44.0 41.0 20.0~ 6.55 12.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULT TO 618Z OR 789X-1 CIRCUIT CARD, MODULE,
OR CHASSIS MOUNTED CIRCUIT LEVEL
K ISOLATE FAULT FROM CIRCUIT CARD OR MODULE LEVEL TO
DISCREET COMPONENT LEVEL
A REMOVE AND REPLACE FAULTY COMPONENT OR MODULE
A REMOVE AND REPLACE FAULTY CIRCUIT CARD OR MODULE
OSR JOB INVENTORY TASK STATEMENTS:
4 H0373 K ISOLATE MALFUNCTIONS WITHIN HIGH FREQUENCY (HF)
EQUIPMENT
4 H0377 K ISOLATE MALFUNCTIONS WITHIN SIDE BAND EQUIPMENT

TASK #: 03980
TROUBLESHOOT 671B-1 RECEIVER/EXCITER FROM CIRCUIT CARD OR MODULE LEVEL TO DISCONNECT COMPONENT OR CHASSIS MOU
DUTY CODE: X4
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: WEEKLY, ONE MONTH
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, TEST EQUIPMENT
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-19 AND T.O.31R2-4-195-51
TTT: 3
SME OPINION: 3
EQUIPMENT:
AC VTVM, DC VTVM, BRIDGING TRANSFORMER, DIGITAL MULTIMETER,
OSCILLOSCOPE, RF VTVM, 979X-1 TEST SET, CAPACITOR TESTER,
SOLDERING KIT, HANDTOOLS
CONDITIONS CUES:
COND: IN SHOP
CUE: NO OUTPUT, FREQUENCY OUTPUT OFF, USER COMPLAINT, NO
RECEIVE/TRANSMIT, LOW RF LEVEL, NO PEAK POWER OUT,
RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 J 0534 5.00 53.0 54.0 51.0 25.0 5.00 18.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULT TO 618Z OR 789X-1 CIRCUIT CARD, MODULE,
OR CHASSIS MOUNTED CIRCUIT LEVEL
K ISOLATE FAULT FROM CIRCUIT CARD OR MODULE LEVEL TO
COMPONENT LEVEL
A REMOVE 618Z OR 789X-1 BOX
A REMOVE FAULTY CIRCUIT CARD OR MODULE
A REMOVE AND REPLACE CIRCUIT CARD OR MODULE
A REMOVE AND REPLACE COMPONENTS
OSR JOB INVENTORY TASK STATEMENTS:
4 J0534 A REMOVE OR INSTALL HF EQUIPMENT PARTS

TASK #: 03990
INSPECT AN/GSH-56
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: 7,84
OJT TRAINABLE: YES, ADEQUATE TRAINING IS GIVEN ALTHOUGH AT A
RAPID PACE. NO, NO HANDS ON IN TECH SCHOOL
QTP ADEQUATE: YES. NO, HAVE NOT USED QTP YET
TNG REFERENCE(S): QTP 304X4 -32A
TTT: 5
SME OPINION: 3
EQUIPMENT:
HEAD CLEANER KIT, SCREWDRIVER, RECORDING TAPE, BLANK REEL,
DEMAGNETIZER, TRAINING TAPE, CLEANING SUPPLIES
REFERENCES:
T.O. 31S3-4-122-1
CONDITIONS CUES:
COND: INSIDE, ELECTRICAL HAZARDS, PREFERRED DURING NON-FLYING
HOURS, POWER ON/OFF
CUE: PMI MASTER LIST
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 I 0448 3.55 20.0 18.0 15.0 8.0 3.55 7.0
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A DEMAGNETIZE HEAD OR TAPES
A CLEAN HEADS
A CHECK OPERATION OF CUE ARM AND LINKAGES
A LOAD/ UNLOAD TAPES
A PERFORM OPERATION CHECK
OSR JOB INVENTORY TASK STATEMENTS:
4 I0448 A OPERATIONALLY CHECK AUTOMATIC RECORDING SYSTEMS

TASK #: 04000
TROUBLESHOOT AN/GSH-56
DUTY CODE: X4
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES:
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES. NO, REQUIRES ELECTRONICS BACKGROUND AND SYSTEM KNOWLEDGE
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 304X4-32A
TTT:
SME OPINION: 5
EQUIPMENT:
TAPE (RECORDING, TEST), HEAD CLEANING KIT, HEXANE, LINT FREE CLOTH, STOP WATCH, TOOL KIT, DEMAGNETIZER
REFERENCES:
T.O. 31S3-4-122-1
CONDITIONS CUES:
COND: INSIDE, POWER ON/OFF
CUE: PMI FINDING, USER COMPLAINT, HUB ASSEMBLY, HEAD, OR PARTS FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0587 4.15 31.0 31.0 27.0 13.0 5.31 12.0
304X4 K 0588 2.85 9.0 7.0 7.0 4.0 5.42 7.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY MECHANICAL COMPONENTS
A REMOVE/REPLACE HUB ASSEMBLY, HEADS, AND OTHER PARTS
OSR JOB INVENTORY TASK STATEMENTS:
4 K0587 A REMOVE OR INSTALL AUDIO RECORDER-REPRODUCER DISCRETE PARTS
4 K0588 A REMOVE OR INSTALL AUTOMATIC RECORDING EQUIPMENT DISCRETE PARTS

TASK #: 04010
ADJUST AN/GSH-56 MECHANICAL ASSEMBLIES
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: YES, NO, HAVE NOT USED QTP YET.
TNG REFERENCE(S): QTP 304X4-32A
TTT: 5
SME OPINION: 3
EQUIPMENT:
TOOL KIT, TAPE, SOFT CLOTH, ALCOHOL
REFERENCES:
T.O. 31S3-4-122-1
CONDITIONS CUES:
COND: INSIDE, ELECTRICAL HAZARDS, PREFERRED DURING NON-FLYING
CUE: SLACK IN TAPE, FAIL-SAFE LIGHT,
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0547 3.32 10.0 10.0 8.0 5.0 6.08 7.0
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE TRANSPORT
A REMOVE TAPE
A CLEAN BRAKE ASSEMBLIES
A ADJUST BRAKE STOP NUT
A ADJUST PINCH WHEEL ARM
A CHECK FOR SLACK IN TAPE
A TIGHTEN SPRING TENSION ON TAKE UP MOTOR
OSR JOB INVENTORY TASK STATEMENTS:
4 K0547 A ALIGN AUTOMATIC RECORDING EQUIPMENT DISCRETE PARTS

TASK #: 04020
ADJUST AN/GSH-56 ELECTRICAL COMPONENTS
DUTY CODE: X4
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES. NO, BASIC ELECTRONICS
QTP ADEQUATE: YES, BUT HAVE NOT USED QTP YET.
TNG REFERENCE(S): QTP 304X4-32A
TTT: 5
SME OPINION: 5
EQUIPMENT:
VOLTMETER, TOOL KIT, TAPE, SOLDERING KIT, OSCILLOSCOPE,
PUNCH BLOCK, SHORTING CLIP
REFERENCES:
T.O. 31S3-4-122-1
CONDITIONS CUES:
COND: INSIDE, ELECTRICAL HAZARDS, PREFERRED DURING FLYING DOWN
TIME
CUE: SLACK IN TAPE, FAIL-SAFE LIGHT, BEEP IS TOO LOUD OR
INAUDIBLE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X4 K 0547 3.32 10.0 10.0 8.0 5.0 6.08 7.0
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST TAPE TENSION
A ADJUST TAPE SENSOR
A ADJUST CAPSTAN SERVO
A ADJUST BEEP AND NULL TONE LEVEL
OSR JCB INVENTORY TASK STATEMENTS:
4 K0547 A ALIGN AUTOMATIC RECORDING EQUIPMENT DISCRETE PARTS

TASK #: 04030
INSPECT CV-3034 CONVERTER
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 1, 90
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O.31R5-2G-101 AND T.O.31R5-2G-104
TTT: 5
SME OPINION: 5
DEFENSE COMMUNICATIONS AGENCY MESSAGE PACDEFSTA 10 88 SETS
ALIGN/ADJUSTMENT PROCEDURES FOR CV-3034 AND OVERRIDES TECH
DATA FOR 90 DAY PMI.
EQUIPMENT:
ELECTRONIC DIGITAL COUNTER, AUDIO SIGNAL GENERATOR, WIDE
RANGE OSCILLATOR, OSCILLOSCOPE, DIGITAL/ANALOG MULTIMETER,
CABLES/CONNECTORS/TERMINATORS, EXTENDER BOARD, TOOL KIT,
VACUUM CLEANER, DB METER, FREQUENCY COUNTER
REFERENCES:
T.O. 31R5-2G-101, T.O. 31R5-2G-104
CONDITIONS CUES:
COND: IN-RACK OR ON-BENCH, POWER ON, EQUIPMENT ON/OFF-LINE
CUE: PMI
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0662 .00 15.0 14.0 12.0 3.0 4.52

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CLEAN INTERIOR/EXTERIOR OF CABINET
- A CHECK STATUS LITES AND INDICATOR LAMPS
- A CHECK OR RESET CONVERTER TO HI-MODE OPERATION FOR USE WITH EARTH-GROUND SATELLITE SYSTEMS
- A CHECK POWER SUPPLY COMPONENTS AND REPLACE AS NEEDED
- A ALIGN/ADJUST CLOCK FREQUENCY
- A ALIGN/ADJUST INPUT/OUTPUT LEVELS
- A ALIGN/ADJUST TRANSMITTER CARD WAVEFORM
- A ALIGN/ADJUST RECEIVER HIGHBRED OUTPUT
- A ALIGN/ADJUST RECEIVER HIGHBRED FREQUENCY
- A ALIGN/ADJUST DIGITAL-ANALOG CHANGE POINT
- A PERFORM FREQUENCY RESPONSE TEST
- A PERFORM BIT ERROR RATE TEST (BER) ON CONVERTER
- A PERFORM END-TO-END SIGNAL LEVEL TEST AND BER TEST WITH DISTANT END

OSR JOB INVENTORY TASK STATEMENTS:

- 6 Q0662 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON ANALOG-TO-DIGITAL CONVERTERS

TASK #: 04040

TROUBLESHOOT CV-3034 CONVERTER

DUTY CODE: X6

TASK STATUS: 3-K

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY.

HOW OFTEN: ANNUALLY

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R5-2G-101 AND T.O. 31R5-2G-104

TTT: 5

SME OPINION: 5

EQUIPMENT:

ELECTRONIC DIGITAL COUNTER, AUDIO SIGNAL GENERATOR, WIDE RANGE OSCILLATOR, OSCILLOSCOPE, DIGITAL/ANALOG MULTIMETER, CABLES/CONNECTORS/TERMINATORS, EXTENDER BOARD, TOOL KIT, DB METER, SOLDERING KIT, FREQUENCY COUNTER

REFERENCES:

T.O. 31R5-2G-101

T.O. 31R5-2G-104

CONDITIONS CUES:

COND: ON-BENCH, POWER ON/OFF, EQUIPMENT OFF-LINE

CUE: PMI FINDING, USER COMPLAINT

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI

304X6 Q 0625 .00 8.0 9.0 10.0 6.0

304X6 Q 0648 .00 7.0 11.0 13.0 7.0

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK INDICATOR LAMPS AND STATUS LITES
- A PERFORM OPERATION CHECK OF CONVERTER
- A DETERMINE IF PROBLEM IS TRANSMIT, RECEIVE, OR POWER SUPPLY
- A REMOVE/REPLACE CIRCUIT CARDS, PARTS AND CONVERTER COMPONENTS
- A ISOLATE FAULTY CONVERTER CIRCUIT CARDS/COMPONENTS
- A ISOLATE FAULTY FRONT PANEL/PARTS
- K APPLY THEORY OF OPERATION OF ANALOG-TO-DIGITAL AND DIGITAL-TO-ANALOG CONVERTERS
- K ISOLATE ANALOG-TO-DIGITAL AND DIGITAL-TO-ANALOG CONVERTERS
- K TROUBLESHOOT ANALOG-TO-DIGITAL AND DIGITAL-TO-ANALOG CONVERTERS

OSR JOB INVENTORY TASK STATEMENTS:

- 6 Q0625 K ISOLATE MALFUNCTIONS IN ANALOG-TO-DIGITAL CONVERTERS

- 6 Q0648 K ISOLATE MALFUNCTIONS TO ANALOG-TO-DIGITAL CONVERTERS

TASK #: 04050
ALIGN/ADJUST CV-3034 CONVERTER
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2G-101 AND T.O. 31R5-2G-104
TTT: 5
SME OPINION: 5
EQUIPMENT:
ELECTRONIC DIGITAL COUNTER, AUDIO SIGNAL GENERATOR, WIDE RANGE OSCILLATOR, OSCILLOSCOPE, DIGITAL/ANALOG MULTIMETER, CABLES/CONNECTORS/TERMINATORS, EXTENDER BOARD, TOOL KIT, DB METER, FREQUENCY COUNTER
REFERENCES:
T.O. 31R5-2G-101
T.O. 31R5-2G-104
CONDITIONS CUES:
COND: ON-BENCH, POWER ON, EQUIPMENT OFF-LINE
CUE: USER COMPLAINT, FAILED COMPONENT FROM TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0608 .00 10.0 10.0 10.0 4.0 5.35
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST FRONT PANEL RESISTORS
A ALIGN/ADJUST CLOCK FREQUENCY
A ALIGN/ADJUST INPUT/OUTPUT LEVELS
A ALIGN/ADJUST TRANSMITTER CARD WAVEFORM
A ALIGN/ADJUST RECEIVER HIGHBRED OUTPUT
A ALIGN/ADJUST RECEIVER HIGHBRED FREQUENCY
A ALIGN/ADJUST DIGITAL-ANALOG CHANGE POINT
A PERFORM FREQUENCY RESPONSE TEST
A PERFORM BIT ERROR RATE TEST (BER) ON CONVERTER
A PERFORM END-TO-END SIGNAL LEVEL TEST AND BER TEST WITH DISTANT END
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0608 A ALIGN ANALOG-TO-DIGITAL CONVERTER COMPONENTS

TASK #: 04060
INSPECT AN/FRC-175 GROUND SATELLITE TERMINAL
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, NOT USED
TNG REFERENCE(S): LOCAL OPERATING INSTRUCTION AND
T.O. 31R5-2UGSC-116WC-1(ANTENNA)
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, BITE
REFERENCES:
LOCAL OPERATING INSTRUCTION
T.O. 31R5-2UGSC-116WC-1 (ANTENNA)
CONDITIONS CUES:
COND: ON-SITE IN RACK, POWER ON
CUE: LOCAL OI
JOB STANDARDS:
IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X6	J 0251	.00	4.0	3.0	3.0	1.0	3.89	
304X6	K 0301	.00	11.0	12.0	11.0	3.0	4.39	
304X6	L 0402	.00	8.0	10.0	10.0	4.0	4.13	

ACTIVITIES SKILL KNOWLEDGE:

- A CLEAN INTERIOR/EXTERIOR OF EQUIPMENT
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CHECK INDICATOR LAMPS
- A CHECK FILTER CLEANLINESS AND FAN OPERATION
- A PERFORM OPERATION AND MAINTENANCE CHECK OF SYSTEM BY TESTING TRANSMIT AND RECEIVE PATH
- A CHECK OPERATION OF KEYBOARD AND AN/UGC-129
- A CHECK EAM ALARM
- A CHECK SATCOM CONTROL
- A INSPECT ANTENNA AND ANTENNA COUPLER VISUALLY FOR OBVIOUS DEFECTS
- A PERFORM A BITE CHECK OF SYSTEM

OSR JOB INVENTORY TASK STATEMENTS:

- 6 J0251 A PERFORM PMIS ON HELIX AIANTENNAS
- 6 K0301 A PERFORM PMIS ON UHF RECEIVE RF AMPLIFIERS
- 6 L0402 A PERFORM PMIS ON UHF TRANSMITTERS

TASK #: 04070

TROUBLESHOOT AN/FRC-175 GROUND SATELLITE TERMINAL

DUTY CODE: X6

TASK STATUS: 3-KP

TIMES ANALYZED: 2

THOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: INDEFINITE

OJT TRAINABLE: YES, (NO TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: NO, NOT USED

TNG REFERENCE(S): T.O. 31R5-2GSC-111-1-5

TTT: 5

SME OPINION: 5

EQUIPMENT:

BITE, TOOL KIT, DIGITAL MULTIMETER,

REFERENCES:

T.O. 31R5-2GSC-111-1-5

CONDITIONS CUES:

COND: EQUIPMENT IN-RACK, POWER ON

CUE: PMI FINDING, OPERATOR COMPLAINT

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X6	J 0238	.00	5.0	4.0	4.0	2.0	5.01	
304X6	L 0404	.00	12.0	12.0	15.0	10.0	3.44	
304X6	L 0418	.00	21.0	31.0	31.0	10.0	6.07	

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM OPERATION AND MAINTENANCE CHECK OF SYSTEM BY TESTING TRANSMIT AND RECEIVE PATH
- A CHECK OPERATION OF KEYBOARD AND AN/UGC-129
- A PERFORM A BITE CHECK OF SYSTEM
- A REMOVE/REPLACE TERMINAL LRUS AND ASSOCIATED COMPONENTS
- K ISOLATE FAULTY CONTROL DEVICE
- K ISOLATE FAULTY SWITCHING RELAYS
- K ISOLATE FAULTY ANTENNA AND/OR ANTENNA COUPLER
- K ISOLATE FAULTY RECEIVER/TRANSMITTER
- K ISOLATE FAULTY KEYBOARD
- K ISOLATE FAULTY SATCOM CONTROL
- K ISOLATE FAULTY EAM ALARM
- K ISOLATE FAULTY 28 VOLT POWER SUPPLY

OSR JOB INVENTORY TASK STATEMENTS:

- 6 J0238 K ISOLATE MALFUNCTIONS IN HELIX ANTENNAS
- 6 L0404 A REMOVE OR REPLACE ASR UNITS
- 6 L0418 A REMOVE OR REPLACE KLYSTRON AMPLIFIERS

TASK #: 04080
TROUBLESHOOT AN/FSC-78 SYSTEM
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES AND NO (TEXT REDUNDANT OF T.O., SOME ITEMS
NOT REFLECTED FOR FIELD CONDITIONS)
TNG REFERENCE(S): QTP 304X6-30L/M/N/O/P AND 304X6-30GA

TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL KIT, ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY
COUNTER, OSCILLOSCOPE, SIGNAL GENERATOR, SPECTRUM ANALYZER BITE

REFERENCES:

T.O. 31R5-2FSC78-1-1

CONDITIONS CUES:

COND: EQUIPMENT UP OR DOWN

CUE: VISUAL INDICATIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0162 .00 73.0 76.0 72.0 33.0 5.06
304X6 G 0168 .00 81.0 81.0 76.0 43.0 3.82

ACTIVITIES SKILL KNOWLEDGE:

A ANALYZE FRONT PANEL INDICATORS AT CONTROL CONSUL
A ISOLATE FAULTY UPLINK SUBSYSTEM
A ISOLATE FAULTY DOWNLINK SUBSYSTEM
A ISOLATE FAULTY TRACKING SUBSYSTEM
A ISOLATE FAULTY FREQUENCY STANDARD SUBSYSTEM
A ISOLATE FAULTY MONITOR AND SWITCHING SUBSYSTEM
A ISOLATE FAULTY TESTING SUBSYSTEM
A ISOLATE FAULTY LIQUID COOLING SYSTEM

OSR JOB INVENTORY TASK STATEMENTS:

6 G0162 A PERFORM PREOPERATIONAL OR OPERATIONAL CHECKS OF EQUIPMENT
6 G0168 A READ METERS OR PERFORM BITE TESTS TO DETERMINE EQUIP-
MENT OPERATION OR SIGNAL QUALITY

TASK #: 04090
TROUBLESHOOT AN/FSC-78 DOWNLINK
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:

CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: WEEKLY, SEMI-MONTHLY, OR MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP-304X6-30M

TTT: 3

SME OPINION: 5

EQUIPMENT:

TOOL KIT, ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY
COUNTER, OSCILLOSCOPE, SIGNAL GENERATOR, SPECTRUM ANALYZER,
CRYOGENIC TOOL KIT, SOLDERING KIT,

REFERENCES:

T.O. 31R5-2G-132, T.O. 31R5-2G-142

T.O. 31R5-2MSC46-42, T.O. 31R5-2FSC78-1-1

CONDITIONS CUES:

COND: EQUIPMENT UP OR DOWN, FAILED EQUIPMENT OFF-LINE

CUE: VISUAL INDICATIONS ON FAULT PANEL, RESULTS OF TROUBLESHOOTING

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 K 0285 .00 52.0 60.0 59.0 28.0 5.67
 304X6 K 0293 .00 7.0 13.0 15.0 11.0 5.28
 304X6 P 0574 .00 15.0 22.0 20.0 11.0 6.85

ACTIVITIES SKILL KNOWLEDGE:
 K ISOLATE FAULTY PARAMETRIC AMPLIFIER
 K ISOLATE FAULTY RECEIVE IFLA
 K ISOLATE FAULTY DOWN CONVERTER
 K ISOLATE FAULTY SYNTHESIZER
 A REMOVE/REPLACE SUBASSEMBLIES, MODULES, LINE REPLACEABLE UNITS, CIRCUIT CARDS, AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:
 6 K0285 K ISOLATE MALFUNCTIONS IN DOWN CONVERTERS
 6 P0574 K ISOLATE MALFUNCTIONS IN TRACKING RECEIVERS
 6 K0293 K ISOLATE MALFUNCTIONS TO RECEIVE IFLAS

TASK #: 04100
 TROUBLESHOOT AN/FSC-78 UPLINK
 DUTY CODE: X6
 TASK STATUS: 3-OJT
 TIMES ANALYZED: 4

TNOTES:
 CONSEQUENCES: MINOR, NONE, NONE
 HOW OFTEN: WEEKLY
 OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
 QTP ADEQUATE: YES
 TNG REFERENCE(S): QTP 30476-30L
 TTT: 3
 SME OPINION: 5

EQUIPMENT:
 TOOL KIT, ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY COUNTER, OSCILLOSCOPE, SIGNAL GENERATOR, SPECTRUM ANALYZER
 SOLDERING KIT,

REFERENCES:
 T.O. 31R5-2-102
 T.O. 31R5-2-112
 T.O. 31P5-2FSC78-1-1
 T.O. 31R5-2G-112
 T.O. 31R5-2G-12
 T.O. 31R5-2G-142
 T.O. 31R5-2G-202
 T.O. 31R5-2MSC46-12
 T.O. 31R5-2MSC46-2
 T.O. 31R5-2G-142

CONDITIONS CUES:
 COND: EQUIPMENT ON OR OFF LINE, FAILED EQUIPMENT DOWN
 CUE: VISUAL INDICATIONS ON FAULT AND SYSTEM STATUS PANEL,
 RESULTS OF TROUBLESHOOTING

JOB STANDARDS:
 IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 L 0333 .00 11.0 16.0 15.0 8.0 6.41
 304X6 L 0336 .00 9.0 19.0 19.0 11.0 5.37
 304X6 N 0508 .0C 18.0 27.0 28.0 16.0 5.28

ACTIVITIES SKILL KNOWLEDGE:
 K ISOLATE FAULTY UP CONVERTER
 K ISOLATE FAULTY TRANSMIT INTERFACILITY LINK AMPLIFIER (IFLA)
 K ISOLATE FAULTY RF AMPLIFIER
 K ISOLATE FAULTY CARRIER LEVEL CONTROL MODULE
 K ISOLATE FAULTY SYNTHESIZER
 A REMOVE/REPLACE SUBASSEMBLIES, MODULES, LINE REPLACEABLE UNITS, AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:
 6 L0333 K ISOLATE MALFUNCTIONS IN TRANSMIT GAIN, AUTOMATIC LOAD, OR AUTOMATIC LEVELING CONTROLS
 6 L0336 K ISOLATE MALFUNCTIONS IN UPLINK WAVEGUIDE SWITCHING NETWORKS
 6 N0508 K ISOLATE MALFUNCTIONS TO RECEIVER-TRANSMITTER (RT) SUBSYSTEMS

TASK #: 04110
INSPECT AN/FSC-78 SIGNAL GENERATOR GROUP
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: DAILY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO, DOESN'T COVER THIS TASK
TNG REFERENCE(S): QTP 304X6-300
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, DISTILLED WATER, FUNNEL, VENT VALVE REMOVAL TOOL,
NONMETALLIC BRISTLE BRUSH, VACUUM CLEANER, LINT-FREE RAGS,
OSCILLOSCOPE, TEST LEADS, VOLTMETER, SAFETY EQUIPMENT
(RUBBER GLOVES, FACE MASK, APRON), BITE, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R5-2G-152
T.O. 31R5-2FSC78-6WC-1
DCAC 800-E70-9
CONDITIONS CUES:
COND: ON OR OFF EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0664 .00 27.0 31.0 30.0 12.0 4.18
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE, CLEAN, AND REPLACE BATTERIES
A CLEAN CESIUM AND INSPECT PHYSICAL CONDITION
A CHECK CESIUM BEAM FREQUENCY STANDARD RAIL AND RACK
CABLE CONDITION
A CHECK CESIUM BEAM FREQUENCY STANDARD FOR WAVE SHAPE
AND AMPLITUDE
A CHECK STANDBY POWER SUPPLY RAIL AND RACK CONDITION
A CHECK CESIUM BEAM FRONT PANEL
A MEASURE TIME OFFSET
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0664 A PERFORM PMIS ON CESIUM BEAM FREQUENCY STANDARDS
6 Q0664 A PERFORM PMIS ON CESIUM BEAM FREQUENCY STANDARDS

TASK #: 04120
TROUBLESHOOT AN/FSC-78 SIGNAL GENERATOR GROUP
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: YEARLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO, DOESN'T COVER THIS TASK
TNG REFERENCE(S): QTP 304X6-300 AND QTP 304X6-30P
TTT: 3
SME OPINION: 3
EQUIPMENT:
ADAPTERS, DC MULTRANGE, AMMETER, SPECTRUM ANALYZER, VARIABLE
ATTENUATOR, FREQUENCY COUNTER, MULTIFUNCTION METER, RF SAMPLING
VOLTMETER, OHM METER, DUAL TRACE OSCILLOSCOPE,
POWER SUPPLY, OSCILLOSCOPE PROBE, CARBON COMPRESSION RHEOSTAT,
50 OHM TERMINATION, TEST LEADS, VARIABLE TRANSFORMER, HANDTOOLS,
SOLDERING KIT, SIGNAL GENERATOR, CAPACITOR TESTER, DIGITAL
MULTIMETER, ANALOG MULTIMETER, CRIMPING TOOLS
REFERENCES:
T.O. 31R5-2G-152
T.O. 31R5-2G-154
CONDITIONS CUES:
COND: ON OR OFF EQUIPMENT
CUE: AUDIBLE AND VISUAL ALARM OR FAILED PMI
TROUBLESHOOTING RESULTS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0633 .00 33.0 39.0 40.0 16.0 6.02
304X6 Q 0650 .00 13.0 23.0 27.0 13.0 5.57

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY RADIO FREQUENCY AMPLIFIERS
K ISOLATE FAULTY RADIO FREQUENCY AMPLIFIER WIRING
K ISOLATE FAULTY RF AMPLIFIER FILTER
K ISOLATE FAULTY CONTROL INDICATOR
K ISOLATE FAULTY CESIUM BEAM FREQUENCY STANDARD
K ISOLATE FAULTY STANDBY POWER SUPPLIES
K ISOLATE FAULTY RECTIFIER CIRCUIT
K ISOLATE FAULTY RECTIFIER CONTROL CIRCUITS
K ISOLATE FAULTY RECTIFIER BATTERY CELLS
K ISOLATE FAULTY RECTIFIER MONITOR (METER) CIRCUITS
K ISOLATE FAULTY CIRCUIT CARDS
A REMOVE/REPLACE SUBASSEMBLIES, MODULES, LINE REPLACEABLE UNITS, CIRCUIT CARDS AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:

6 Q0633 K ISOLATE MALFUNCTIONS IN FREQUENCY SYNTHESIZERS
6 Q0650 K ISOLATE MALFUNCTIONS TO CESIUM BEAM FREQUENCY STANDARDS

TASK #: 04130

ALIGN OR ADJUST AN/FSC-78 SIGNAL GENERATOR GROUP

DUTY CODE: X6

TASK STATUS: 3-K

TIMES ANALYZED: 4

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: MONTHLY

OJT TRAINABLE: YES

QTP ADEQUATE: NO, TASK NOT COVERED COMPLETELY

TNG REFERENCE(S): QTP 304X6-300

TTT: NONE

SME OPINION: 3

EQUIPMENT:

ALIGNMENT TOOL KIT, TOOL KIT, OSCILLOSCOPE, DIGITAL VOLTMETER

REFERENCES:

T.O. 31R5-2G-152

T.O. 33A1-5-318-11

T.O. 31R2-2USC28-1-2

CONDITIONS CUES:

COND: ON EQUIPMENT

CUE: REPAIR ACTION, PMI, EQUIPMENT FAILURE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0605 .00 11.0 21.0 23.0 13.0 5.43
304X6 Q 0616 .00 21.0 24.0 21.0 7.0 5.59

ACTIVITIES SKILL KNOWLEDGE:

A ALIGN/ADJUST AN/FRC-78 SIGNAL GENERATOR GROUP STANDBY POWER CHARGING CIRCUITS
A ALIGN/ADJUST AN/FRC-78 SIGNAL GENERATOR GROUP RF AMPLIFIERS
A ALIGN/ADJUST AN/FRC-78 SIGNAL GENERATOR GROUP CESIUM BEAM FREQUENCY STANDARDS

OSR JOB INVENTORY TASK STATEMENTS:

6 Q0605 A ADJUST CESIUM BEAM FREQUENCY STANDARDS

6 Q0616 A ALIGN FREQUENCY SYNTHESIZER COMPONENTS

TASK #: 04140
INSPECT AN/FSC-78 MONITOR AND SWITCHING FUNCTION
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 6
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: DAILY, WEEKLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30P
TTT: 3
SME OPINION: 3
EQUIPMENT:
ANALOG MULTIMETER, OSCILLOSCOPE, TOOL KIT, ADAPTERS, TEST LEADS,
LIQUID DETERGENT, VARIABLE ATTENUATOR, VACUUM CLEANER, CLEAN
RAGS, DIGITAL MULTIMETER, SPECTRUM ANALYZER
REFERENCES:
T.O. 31R5-2FSC78-1-1
T.O. 31R5-2FSC-78-6WC-1
T.O. 31R5-2G-202
T.O. 31R5-2G-122
T.O. 31R5-2-122
T.O. 31R5-2G-162
T.O. 31R5-2G-212
T.O. 31R5-2G-182
T.O. 31R5-2G-202
T.O. 31R5-2G-172
T.O. 31R5-2G-222
CONDITIONS CUES:
COND: EQUIPMENT UP/DOWN, POWER ON
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0164 .00 62.0 67.0 64.0 31.0 4.14
304X6 Q 0663 .00 7.0 10.0 12.0 3.0 4.72
304X6 Q 0672 .00 5.0 4.0 5.0 2.0 3.85
ACTIVITIES SKILL KNOWLEDGE:
A VERIFY RF MONITOR STATUS INDICATOR LAMPS
A VERIFY LOW/HIGH PILOT FAULTS INDICATORS
A ANALYZE MONITORING AND SWITCHING FUNCTION
A VERIFY TRACKING DOWN CONVERTER
A VERIFY TRACKING DEMODULATOR
A VERIFY TRACKING RECEIVER
A VERIFY ANTENNA CONTROL PANEL
A VERIFY FAULT AND STATUS PANEL
A VERIFY TRANSMITTER POWER MONITOR
A VERIFY RECEIVE GAIN MONITOR
A VERIFY RF SELECTOR-INDICATOR
A VERIFY SPECTRUM DISPLAY AMPLIFIER
A VERIFY RF/RF TRANSLATOR
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0663 A PERFORM PMIS ON AUTOMATIC FAULT SENSING AND SWITCHING
NETWORKS
6 Q0672 A PERFORM PMIS ON MANUAL TRANSFER UNITS OR SWITCHING
PANELS
6 G0164 A PERFORM SWITCHOVERS OF EQUIPMENT SUBASSEMBLIES TO
REDUNDANT EQUIPMENT

TASK #: 04150
TROUBLESHOOT AN/FSC-78 MONITOR AND SWITCHING FUNCTION
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: WEEKLY, SEMIANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30P
TTT: 3
SME OPINION: 5
EQUIPMENT:
HANDTOOLS, ANALOG MULTIMETER, DIGITAL MULTIMETER,
FREQUENCY COUNTER, SIGNAL GENERATOR, OSCILLOSCOPE,
SPECTRUM ANALYZER, SOLDERING KIT
REFERENCES:
T.O. 31R5-2FSC78-1-1
T.O. 31R5-2G-162
T.O. 31R5-2G-172
T.O. 31R5-2G-182
T.O. 31R5-2G-202
T.O. 31R5-2G-212
T.O. 31R5-2G-222
T.O. 331R5-2FSC78-1-1
T.O. 331R5-2G-162
T.O. 331R5-2G-172
T.O. 331R5-2G-182
T.O. 331R5-2G-202
T.O. 331R5-2G-222
T.O. 331R5-2G-212
CONDITIONS CUES:
COND: EQUIPMENT UP OR DOWN
CUE: VISUAL INDICATIONS ON FAULT AND SYSTEM STATUS PANEL,
RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0348 .00 11.0 13.0 15.0 13.0 4.94
304X6 Q 0627 .00 4.0 6.0 8.0 4.0 5.53
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY SYSTEM STATUS LOGIC UNIT
K ISOLATE FAULTY RECEIVE GAIN MONITOR UNIT
K ISOLATE FAULTY FAULT AND STATUS PANEL
K ISOLATE FAULTY SPECTRUM DISPLAY AMPLIFIER
K ISOLATE FAULTY RF SELECTOR-INDICATOR PANEL
K ISOLATE FAULTY RF/RF TRANSLATOR
A REMOVE/REPLACE SUBASSEMBLIES, MODULES, CIRCUIT CARDS,
AND ASSOCIATED PARTS
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0627 K ISOLATE MALFUNCTIONS IN AUTOMATIC FAULT SENSING AND
SWITCHING NETWORKS
6 L0348 K ISOLATE MALFUNCTIONS TO FORWARD POWER MONITORS

TASK #: 04160
ALIGN/ADJUST AN/FSC-78 CARRIER LEVEL CONTROL/DETECTOR
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30L
TTT: 3
SME OPINION: 3
DIFFICULT TASK REQUIRING HIGHLY SKILLED TRAINER
EQUIPMENT:
FREQUENCY COUNTER, SPECTRUM ANALYZER, FREQUENCY GENERATOR,
ATTENUATORS, ADAPTERS, CABLES, MULTIFUNCTION METER, DIGITAL
MULTIMETER, ANALOG MULTIMETER, POWER SUPPLIES, TOOL KIT
REFERENCES:
T.O. 31R5-2FSC78-6WC-1
T.O. 31R5-2G-202
CONDITIONS CUES:
COND: EQUIPMENT OFFLINE
CUE: VISUAL INDICATION OF SUBASSEMBLY FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0316 .00 11.0 19.0 22.0 13.0 4.68
ACTIVITIES SKILL KNOWLEDGE:
A SET UP TEST EQUIPMENT
A MEASURE/ADJUST VARIABLE ATTENUATOR AT1 OUTPUT
A MEASURE VIDEO AMPLIFIER A1 OUTPUT
A MEASURE/ADJUST VARIABLE ATTENUATORS AT2 AND AT3
OUTPUT
A MEASURE/ADJUST POWER LEVEL DETECTOR INPUT AND OUTPUT
OSR JOB INVENTORY TASK STATEMENTS:
6 L0316 A ALIGN FORWARD POWER MONITORS

TASK #: 04170
ALIGN/ADJUST AN/FSC-78 RECEIVER GAIN MONITOR UNIT
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30P
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, BITE
REFERENCES:
T.O. 31R5-2FSC78-6WC-1
CONDITIONS CUES:
COND: EQUIPMENT ON LINE
CUE: VISUAL INDICATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0282 .00 24.0 26.0 23.0 9.0 6.33
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE ACCESS PANEL
A ADJUST DOWNLINK 1 AND 2 PILOT INDICATIONS
A ADJUST MINOR ALARM FOR PILOTS
A ADJUST MAJOR ALARMS FOR PILOTS
A RETURN TO NORMAL OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
6 K0282 A INSTALL COMMUNICATIONS PATCH PANEL

TASK #: 04180
ALIGN/ADJUST AN/FSC-78 TRANSMITTER POWER MONITOR METER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: SEMIANNNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30P
TTT: 3
SME OPINION: 3
EQUIPMENT:
PRECISION POWER SUPPLY, TEST LEADS AND CABLES, TOOL KIT
REFERENCES:
T.O. 31R5-2G-212
CONDITIONS CUES:
COND: EQUIPMENT ON-LINE
CUE: VISUAL INDICATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE IJOB IENL 5SKL 7SKL TD ATI
304X6 L 0321 .00 13.0 19.0 21.0 11.0 5.44
ACTIVITIES SKILL KNOWLEDGE:
A CONNECT TEST EQUIPMENT
A ADJUST FEEDPOWER METER
A CALIBRATE PA1/PA2 METERS
A RESTORE EQUIPMENT TO OPERATING CONFIGURATION
OSR JOB INVENTORY TASK STATEMENTS:
6 L0321 A ALIGN TRANSMIT POWER MONITORS

TASK #: 04190
TROUBLESHOOT AN/FSC-78 TRACKING FUNCTION
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: WEEKLY OR SEMIANNNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30N, T.O. 31R5-2FSC-1-1,
AND T.O. 31R5-2G-122
TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL KIT, ANALOG MULTIMETER, DIGITAL MULTIMETER, FREQUENCY
COUNTER, OSCILLOSCOPE, SIGNAL GENERATOR, SPECTRUM ANALYZER
REFERENCES:
T.O. 31R5-2-122
T.O. 31R5-2FSC78-1-1
CONDITIONS CUES:
COND: EQUIPMENT UP OR DOWN
CUE: VISUAL INDICATION ON FAULT AND SYSTEM STATUS PANEL,
RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE IJOB IENL 5SKL 7SKL TD ATI
304X6 P 0584 .00 11.0 17.0 16.0 8.0 5.53
304X6 P 0585 .00 27.0 35.0 35.0 13.0 5.43
304X6 P 0586 .00 12.0 19.0 21.0 12.0 5.77
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY TRACKING RECEIVER
K ISOLATE FAULTY TRACKING DEMODULATOR
K ISOLATE FAULTY SERVO CONTROL GROUP
K ISOLATE FAULTY TRACKING DOWN CONVERTER
A REMOVE/REPLACE SUBASSEMBLIES, MODULES, LINE REPLACE-
ABLE UNITS, CIRCUIT CARDS, AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
6 P0584 K ISOLATE MALFUNCTIONS TO TRACKING DEMODULATORS
6 P0585 K ISOLATE MALFUNCTIONS TO TRACKING DOWN CONVERTERS
6 P0586 K ISOLATE MALFUNCTIONS TO TRACKING RECEIVERS

TASK #: 04200
ALIGN/ADJUST AN/FSC-78 TRACKING FUNCTION
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30N
TTT: 3
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, SPECTRUM ANALYZER, TOOL KIT
REFERENCES:
T.O. 31R5-2G-122
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON LINE
CUE: ALARM, TRACKING OUT OF PARAMETERS, COMPONENT REPLACEMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 P 0561 .00 8.0 15.0 15.0 8.0 6.45
304X6 P 0562 .00 33.0 37.0 34.0 12.0 5.75
304X6 P 0563 .00 14.0 22.0 22.0 11.0 6.70
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM TEST SIGNAL CHECK
A ALIGN/ADJUST TRACKING DEMODULATOR, TRACKING RECEIVER,
AND TRACKING DOWN CONVERTER VOLTAGES
A ALIGN/ADJUST TRACKING DEMODULATOR, TRACKING RECEIVER,
AND TRACKING DOWN CONVERTER SIGNAL LEVELS
OSR JOB INVENTORY TASK STATEMENTS:
6 P0561 A ALIGN TRACKING DEMODULATOR COMPONENTS
6 P0562 A ALIGN TRACKING DOWN CONVERTER COMPONENTS
6 P0563 A ALIGN TRACKING RECEIVER COMPONENTS
6 P0563 A ALIGN TRACKING RECEIVER COMPONENTS

TASK #: 04210
 INSPECT AN/FSC-78 ANTENNA, OE-170 (V)/FSC
 DUTY CODE: X6
 TASK STATUS: 3-K
 TIMES ANALYZED: 4
 TNOTES:
 CONSEQUENCES: MINOR, NONE, NONE
 HOW OFTEN: DAILY VISUAL INSPECTIONS; 28, 56, 84, 168, AND 336-DAY
 PMIS
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: YES
 TNG REFERENCE(S): QTP 304X6-30K
 TTT: 3
 SME OPINION: 3
 EQUIPMENT:
 TOOL KIT, LINT-FREE RAGS, VACUUM CLEANER, CLEANING FLUID,
 LUBRICATING OIL, OIL FILTERS, TRANSMISSION FLUID
 REFERENCES:
 T.O. 31R5-2FSC78-6WC-1
 T.O. 31R5-2G-102
 CONDITIONS CUES:
 COND: EQUIPMENT UP OR DOWN
 CUE: PMI
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 J 0253 .00 28.0 33.0 31.0 9.0 4.40
 304X6 P 0589 .00 25.0 29.0 29.0 9.0 4.37
 304X6 P 0590 .00 7.0 10.0 13.0 7.0 4.42
 ACTIVITIES SKILL KNOWLEDGE:
 A INSPECT ANTENNA EXTERIOR FOR GENERAL CONDITION
 A INSPECT ANTENNA INTERIOR FOR GENERAL CONDITION
 A VERIFY AIR CONDITIONING UNIT IS OPERATIONAL
 A VERIFY AIR DRYER IS OPERATING
 A CHECK NITROGEN BOTTLE FOR PROPER INDICATIONS
 A VERIFY AZIMUTH/ELEVATION DRIVE MOTORS FOR PROPER
 OPERATION
 A CHECK ANTENNA GROUP LIGHTING FOR PROPER OPERATION
 A CHECK ANTENNA GROUP CABLE ENTRANCE PANELS FOR LOOSE
 CONNECTIONS
 A CHECK ANTENNA GROUP GROUNDING SYSTEM FOR LOOSE CON-
 NECTIONS
 A CHECK ANTENNA GROUP WAVEGUIDE COMPONENTS FOR PRESSUR-
 IZATION
 A CHECK ANTENNA GROUP FEED ASSEMBLY PRESSURIZATION
 A INSPECT ELEVATED EQUIPMENT ROOM DOOR FINGER STOCK FOR
 GENERAL CONDITION
 A REPLACE AZIMUTH/ELEVATION GEARBOX OIL FILTERS
 A CHECK AZIMUTH/ELEVATION DRIVE MOTOR ASSEMBLY BLOWERS
 FOR CLEANLINESS
 A PERFORMANCE TEST NITROGEN LOW-PRESSURE CONTROL PANEL
 A PERFORMANCE TEST DRY AIR LOW-PRESSURE CONTROL PANEL
 A CLEAN DIRECT CURRENT CONTROL RADIO FREQUENCY INTER-
 FERENCE (RFI) FILTERS
 A REPLACE AIR DRYER FELT FILTERS
 A CHECK ANTENNA HOIST FOR GENERAL CONDITION
 A SERVICE SHOCK ABSORBERS WITH TRANSMISSION FLUID
 A LUBRICATE AZIMUTH/ELEVATION GEARBOX HANDBRAKES
 A CHANGE AZIMUTH/ELEVATION GEARBOX OIL
 A VERIFY THAT AZIMUTH/ELEVATION STOWPIN IS OPERATIONAL
 A GREASE PILLOW-BLOCK BEARINGS
 A LUBRICATE AZIMUTH UPPER/LOWER BEARINGS
 A LUBRICATE AZIMUTH/ELEVATION GEARBOX FLEXIBLE GEAR
 COUPLING
 OSR JOB INVENTORY TASK STATEMENTS:
 6 P0590 A PERFORM PMIS ON ANTENNA DRIVE TRANSMISSIONS
 6 J0253 A PERFORM PMIS ON PARABOLIC ANTENNAS
 6 P0589 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
 ANTENNA DRIVE MOTORS

TASK #: 04220
TROUBLESHOOT AN/FSC-78 ANTENNA, OE-170(V)/FSC
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO, REFERS TO T.O. FOR REMOVING/REPLACING PARTS
TNG REFERENCE(S): QTP 304X6-30K
TTT: 3
SME OPINION: 5
EQUIPMENT:
CLAMP-ON AMMETER, ANALOG MULTIMETER, CABLE REPAIR KIT,
HUMIDISTAT SET PLUG, SPECIAL ANTENNA TOOL KITS, DIGITAL
MULTIMETER, CABLE REPAIR KIT, TOOL KIT, EXTENSION CORD
WITH DROP LIGHT, TORQUE WRENCHES, BLOCK AND TACKLE, SOLDERING KIT
REFERENCES:
T.O. 31R5-2G-102
CONDITIONS CUES:
COND: EQUIPMENT UP OR DOWN
CUE: VISUAL INDICATION FROM STATUS PANEL OR PMI, RESULTS OF
TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 J 0237 .00 13.0 15.0 16.0 11.0 6.45
304X6 J 0239 .00 17.0 19.0 22.0 10.0 6.08
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY FEEDHORN RAIN DEFLECTOR
K ISOLATE FAULTY ANTENNA POWER DISTRIBUTION
K ISOLATE FAULTY STOW PIN
K ISOLATE FAULTY STOW PIN ACTUATORS
K ISOLATE FAULTY AZIMUTH/ELEVATION GEARBOXES
K ISOLATE FAULTY ANTENNA HOISTS
K ISOLATE FAULTY ANTENNA ELECTRIC LIGHT/OBSTRUCTION
LIGHT
K ISOLATE FAULTY AIR DRYER
K ISOLATE FAULTY SPACE HEATER
K ISOLATE FAULTY WAVEGUIDE PRESSURIZATION AND LOW-
PRESSURE CONTROL PANEL
A REMOVE/REPLACE SUBASSEMBLIES, MODULES, LINE REPLACE-
ABLE UNITS, CIRCUIT CARDS, AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
6 J0237 K ISOLATE MALFUNCTIONS IN FEEDHORN ASSEMBLIES
6 J0239 K ISOLATE MALFUNCTIONS IN PARABOLIC ANTENNAS

TASK #: 04230
ALIGN OR ADJUST AN/FSC-78 ANTENNA
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 4
TNOTES:
HOW OFTEN: DAILY, WEEKLY, BI-WEEKLY, MONTHLY, SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 304X6-30K
TTT: NONE
SME OPINION: 5
EQUIPMENT:
TOOL KITS, ANALOG MULTIMETER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R5-2G-102
CONDITIONS CUES:
COND: EQUIPMENT UP OR DOWN
CUE: AFTER REPLACEMENT OF PARTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 J 0224 .00 27.0 36.0 34.0 13.0 3.35
304X6 J 0225 .00 18.0 27.0 25.0 17.0 5.26
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST STOW PIN SWITCHES
A ALIGN/ADJUST LIMIT SWITCHES
A ALIGN/ADJUST OIL PRESSURE SWITCH
A ALIGN/ADJUST GEAR BOX OIL HEATERS
A ALIGN/ADJUST HAND CRANK SAFETY SWITCH
A ALIGN/ADJUST HOIST DISK BRAKE
A ALIGN/ADJUST ELECTRIC LIGHT CONTROL
A ALIGN/ADJUST AIR DRYER
A ALIGN/ADJUST FLOW RATE ALARM
A ALIGN/ADJUST PRESSURE REGULATOR/ALARM
OSR JOB INVENTORY TASK STATEMENTS:
6 J0224 A ADJUST DEHYDRATOR OR PRESSURIZER COMPONENTS
6 J0225 A ALIGN ANTENNA POSITIONING CIRCUIT COMPONENTS

TASK #: 04250
INSPECT AN/GSC-24(V) DIGITAL MULTIPLEXER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 1, 7, 14, 28, 56, 168
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30GA AND QTP 304X6-30GE
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, FREQUENCY COUNTER, AUDIO OSCILLATOR, AC VOLTMETER,
BITE, DIGITAL DATA TEST SET
REFERENCES:
T.O. 31W2-2GSC24-2
T.O. 31W2-2GSC24-4
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON/OFF LINE
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 M 0502 .00 31.0 28.0 25.0 9.0 4.40
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM (MULTIPLEXER) LAMP AND DIAGNOSTICS SELF TEST
A PERFORM SYSTEM VISUAL INSPECTION FOR OBVIOUS DEFECTS
A CLEAN COOLING AIR FILTERS
A CALIBRATE REFERENCE TIMER ASSEMBLY
A CALIBRATE TRANSITION ENCODER/TIMING RECOVERY ASSEMBLY
A ALIGN/ADJUST REFERENCE TIMER ASSEMBLY
A ALIGN/ADJUST TRANSITION ENCODER/TIMING RECOVERY
ASSEMBLY
A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS
OSR JOB INVENTORY TASK STATEMENTS:
6 M0502 A PERFORM PMIS ON TIME DIVISION MULTIPLEXERS

TASK #: 04260
TROUBLESHOOT DCSS AN/GSC-24(V) DIGITAL MULTIPLEXER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE,
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO (TASK NOT ADEQUATELY COVERED)
TNG REFERENCE(S): QTP 304X6-30GA AND 304X6-30GE
TTT: 3
SME OPINION: 5
EQUIPMENT:
FREQUENCY COUNTER, AUDIO OSCILLATOR, AC VOLTMETER, BITE, DIGITAL
DATA TEST SET, TOOL KIT, TORQUE WRENCH, WIRE WRAPPING TOOL
REFERENCES:
T.O. 31W2-2GSC24-2
T.O. 31W2-2GSC24-3
T.O. 31W2-2GSC24-4
CONDITIONS CUES:
COND: EQUIPMENT UP OR DOWN, POWER ON/OFF
CUE: FRONT PANEL INDICATIONS AND SELF TEST INDICATIONS, FAILED
PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 M 0479 .00 27.0 23.0 24.0 9.0 5.83
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY PRINTED CIRCUIT CARDS
K ISOLATE FAULTY LRU
K ISOLATE FAULTY MINOR HARDWARE
A REMOVE/REPLACE PRINTED CIRCUIT CARDS
A REMOVE/REPLACE LRU
A REMOVE/REPLACE MINOR HARDWARE
A PERFORM OPERATION CHECK OF SYSTEM
OSR JOB INVENTORY TASK STATEMENTS:
6 M0479 K ISOLATE MALFUNCTIONS IN TIME DIVISION MULTIPLEXERS

TASK #: 04270
ALIGN OR ADJUST DCSS AN/GSC-24(V) DIGITAL MULTIPLEXER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES
QTP ADEQUATE: NO (INCLUDES ANALYSIS ONLY)
TNG REFERENCE(S): QTP 304X6-30GA
TTT: 3
SME OPINION: 3
EQUIPMENT:
AUDIO OSCILLATOR, FREQUENCY COUNTER, TOOL KIT
REFERENCES:
T.O. 31W2-2GSC24-2
T.O. 31W2-2GSC24-3
T.O. 31W2-2GSC24-4
CONDITIONS CUES:
COND: EQUIPMENT UP OR DOWN
CUE: TROUBLESHOOTING RESULTS, REMOVE OR REPLACE, PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 M 0457 .00 29.0 28.0 26.0 8.0 5.68
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST REFERENCE TIMER ASSEMBLY
A ALIGN/ADJUST TRANSITION ENCODER/TIMING RECOVERY
ASSEMBLY
A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS
A INSPECT CIRCUIT CARD STRAP ARRANGEMENT AND ADJUST FOR
LINK REQUIREMENTS
OSR JOB INVENTORY TASK STATEMENTS:
6 M0457 A ALIGN TIME DIVISION MULTIPLEXERS

TASK #: 04280
INSPECT THE AN/GSC-39(V) ANTENNA GROUP OE-222/G
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 1, 7, 28, 84, 168, AND AS REQUIRED
OJT TRAINABLE: YES, NO, SYSTEM KNOWLEDGE, SAFETY
QTP ADEQUATE: YES
TNG REFERENCE(S): T.O. 31R5-2G-351
TTT: 5
SME OPINION: 5
EQUIPMENT:
FIRE HOSES, HAND TOOLS, SAFETY HARNESS, VACUUM CLEANER, OIL PUMPS
REFERENCES:
T.O. 31R5-2G-351
CONDITIONS CUES:
COND: ON EQUIPMENT, 28 AND 84 DAY EQUIPMENT DOWN, HIGH PRESSURE GAS AND CRYOGENIC PRESSURE LINES POSE SPECIAL SAFETY HAZARDS
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 J 0253 .00 28.0 33.0 31.0 9.0 4.40
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT VISUALLY FOR CLEANLINESS, DETERIORATION, MALFUNCTION, UNUSUAL SIGHTS, SOUNDS, OR ODORS
A CHECK METER READINGS
A LUBRICATE ANTENNA GROUP MECHANICAL PARTS
A CHANGE OIL IN ANTENNA GROUP SPEED DECREASERS
A CHANGE EQUIPMENT OIL
A LUBRICATE EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
6 J0253 A PERFORM PMIS ON PARABOLIC ANTENNAS

TASK #: 04290
ADJUST AN/GSC-39(V) ANTENNA GROUP OE-222/G SERVO AMPLIFIER CONTROL CARDS BIAS
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, SYSTEM KNOWLEDGE
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31R5-2G-351
TTT: 5
SME OPINION: 7
EQUIPMENT:
OSCILLOSCOPE
REFERENCES:
T.O. 31R5-2G-351
CONDITIONS CUES:
COND: EQUIPMENT DOWN OR SPECIAL MAINTENANCE PROCEDURE NOT IN TO HIGH VOLTAGE HAZARD
CUE: IMPROPER ANTENNA TRACKING, RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 P 0564 .00 16.0 19.0 16.0 8.0 6.62
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST AZIMUTH NUMBER 1 AND 2 CONTROL CARD RESISTORS
A ADJUST ELEVATION CONTROL CARD RESISTOR
A ADJUST AZIMUTH NUMBER 1 AND 2 SYNC CARD RESISTORS
A ADJUST ELEVATION SYNC CARD RESISTOR
OSR JOB INVENTORY TASK STATEMENTS:
6 P0564 A ALIGN TRACKING SERVO CONTROL COMPONENTS

TASK #: 04300
ADJUST AN/GSC-39(V) ANTENNA GROUP OE-222/G ANTENNA DRIVEMOTOR BRAKE
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31R5-2G-351
TTT: 5
SME OPINION: 5
EQUIPMENT:
HAND TOOLS
REFERENCES:
T.O. 31R5-2G-351
CONDITIONS CUES:
COND: OIN SHOP
CUE: ANTENNA DRIVE BRAKE LOCKS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 J 0225 .00 18.0 27.0 25.0 17.0 5.26
304X6 P 0558 .00 19.0 24.0 24.0 11.0 6.71
ACTIVITIES SKILL KNOWLEDGE:
A MANUALLY RELEASE BRAKE
A REMOVE MOTOR
A ADJUST BRAKE MAGNET GAP PER T.O.
OSR JOB INVENTORY TASK STATEMENTS:
6 J0225 A ALIGN ANTENNA POSITIONING CIRCUIT COMPONENTS
6 P0558 A ALIGN ANTENNA TRACKING CONTROL DRAWER COMPONENTS

TASK #: 04310
ADJUST AN/GSC-39(V) ANTENNA GROUP OE-222/G POWER SUPPLY
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31R5-2G-351
TTT: 5
SME OPINION: 5
EQUIPMENT:
OSCILLOSCOPE, MULTIMETER, VARIABLE TRANSFORMER
REFERENCES:
T.O. 31R5-2G-351
CONDITIONS CUES:
COND: IN SHOP BENCH CHECK
CUE: RESULT OF TROUBLESHOOT, TRACKING PROBLEMS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 M 0441 .00 13.0 18.0 19.0 9.0 4.24
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE POWER SUPPLY
A ADJUST VARIABLE RESISTORS AND CAPACITORS TO CORRECT
OUTPUT
A ADJUST BRAKE MAGNET GAP PER T.O.
OSR JOB INVENTORY TASK STATEMENTS:
6 M0441 A ALIGN DIRECT CURRENT (DC) POWER SUPPLY UNITS

TASK #: 04320
ALIGN AN/GSC-39(V) ANTENNA GROUP OE-222/G ELEVATION AND AZIMUTH DATA BOXES
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, SYSTEM KNOWLEDGE
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31R5-2G-351
TTT: 5
SME OPINION: 7
EQUIPMENT:
HAND TOOLS
REFERENCES:
T.O. 31R5-2G-351
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED, TIME CRITICAL
CUE: CONTROL PANEL INDICATION DOES NOT MATCH ANTENNA LOCATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 P 0566 .00 14.0 18.0 19.0 11.0 6.90
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST AZIMUTH AND ELEVATION TO KNOWN ENGINEERING BENCHMARK
A ADJUST REFLECTOR PER T.O.
A ADJUST AZIMUTH AND ELEVATION DATA BOXES PER T.O.
OSR JOB INVENTORY TASK STATEMENTS:
6 P0566 A ALIGN TRACKING SYSTEMS

TASK #: 04330
ALIGN AN/GSC-39(V) ANTENNA GROUP OE-222/G PARAMETRIC AMPLIFIER GROUP OC-133/C
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, SYSTEM KNOWLEDGE
TEST EQUIPMENT, ADVANCED MATH
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31R5-2G-351 AND T.O. 31R5-2G-132
TTT: 5
SME OPINION: 7
EQUIPMENT:
OSCILLOSCOPE, SIGNAL GENERATOR, VARIABLE ATTENUATOR, POWER
METER, STICK ATTENUATOR, X-Y RECORDER, NETWORK ANALYZER,
HANDTOOLS, ELECTRONIC TOOL KIT, CRYOGENIC MAINTENANCE KIT
REFERENCES:
T.O. 31R5-2G-351, T.O. 31R5-2G-132
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED, TIME CRITICAL
CUE: PUMP POWER, BIAS VOLTAGE, GAIN VOLTAGE, RECEIVE GAIN
MONITOR UNIT METER READINGS OUT OF T.O. SPECIFICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0280 .00 41.0 44.0 39.0 19.0 7.27
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST TEMPERATURE METER
A ADJUST VACUUM GAUGE METER
A ADJUST PARAMETRIC POWER SUPPLY
A ALIGN LEVELING LOOP AMPLIFIER CARD GAINS AND VOLTAGES
A ADJUST REFRIGERATOR CONTROL VARIACT (VARIABLE TRANSFORMER)
A ADJUST AMPLIFIER TEMPERATURE STABILIZATION
A EVALUATE AND RECHARGE CRYOGENIC REFRIGERATOR
A INJECT RF SIGNAL TO PARAMETRIC AMPLIFIER
A MEASURE INSERTION LOSS OF PARAMETRIC AMPLIFIER
A ADJUST BIAS AND GAIN VOLTAGES OF PARAMETRIC AMPLIFIER
A COMPUTE STAGE TWO INSERTION LOSS
A ADJUST STAGE TWO BIAS AND GAIN VOLTAGES
A COMPUTE INSERTION LOSS FOR STAGE THREE
A ADJUST STAGE THREE BIAS AND GAIN VOLTAGES
A ADJUST STAGES ONE AND TWO BIAS AND GAIN VOLTAGES
A ADJUST STAGES ONE, TWO, AND THREE BIAS AND
VOLTAGES OF PARAMETRIC AMPLIFIER
OSR JOB INVENTORY TASK STATEMENTS:
6 K0280 A ALIGN PARAMETRIC OR LOW NOISE AMPLIFIER (LNA) COMPONENTS

TASK #: 04340
ADJUST AN/GSC-39(V) ANTENNA GROUP OE-222/G ELECTRIC DESSICANT DEHUMIDIFIER
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: YES, BUT NOT USED
TNG REFERENCE(S): T.O. 31R5-2G-102
TTT: 5
SME OPINION: 5
EQUIPMENT:
HAND TOOLS, ANALOG MULTIMETER, DIGITAL MULTIMETER,
REFERENCES:
T.O. 31R5-2G-102
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: TANK PRESSURE AND OUTLET PRESSURE METER READINGS OUT OF
SPECIFICATIONS, EXCESSIVE COMPRESSOR OPERATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 J 0224 .00 27.0 36.0 34.0 13.0 3.35
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST AIR COMPRESSOR PRESSURE SWITCH
A ADJUST CAPACITY CONTROL VALVE
OSR JOB INVENTORY TASK STATEMENTS:
6 J0224 A ADJUST DEHYDRATOR OR PRESSURIZER COMPONENTS

TASK #: 04350
SERVICE AN/GSC-39(V) ANTENNA GROUP OE-222/G HD-955B/GR HEAT EXCHANGER (DEHYDRA
TOR)
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: DAILY
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS
QTP ADEQUATE: YES, BUT NOT USED
TNG REFERENCE(S): T.O. 31R5-2G-112
TTT: 5
SME OPINION: 5
EQUIPMENT:
HAND TOOLS, ANALOG MULTIMETER, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R5-2G-112
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI OR AS NEEDED
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 J 0224 .00 27.0 36.0 34.0 13.0 3.35
ACTIVITIES SKILL KNOWLEDGE:
A ADD COOLANT
A CHANGE IN-LINE AND PURITY FILTERS
OSR JOB INVENTORY TASK STATEMENTS:
6 J0224 A ADJUST DEHYDRATOR OR PRESSURIZER COMPONENTS

TASK #: 04360
REMOVE AND REPLACE AN/GSC-39(V) ANTENNA GROUP OE-222/G HD-955B/GR HEAT EXCHANGER MOTOR AND FAN MOTOR
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SIX MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31R5-2G-112
TTT: 5
SME OPINION: 5

EQUIPMENT:
HAND TOOLS, ANALOG MULTIMETER, DIGITAL MULTIMETER, SOLDERING KIT

REFERENCES:
T.O. 31R5-2G-112

CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: HIGH TEMPERATURE FAULT, NO COOLANT FLOW

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0220 .00 32.0 36.0 40.0 18.0 4.72

ACTIVITIES SKILL KNOWLEDGE:
A SHUT OFF COOLANT FLOW
A DISCONNECT COOLANT LINES
A REMOVE AND REPLACE MOTOR AND PUMP ASSEMBLY
A REMOVE AND REPLACE FAN MOTOR

OSR JOB INVENTORY TASK STATEMENTS:
6 I0220 A REMOVE OR REPLACE MECHANICAL SUBASSEMBLIES

TASK #: 04370
INSPECT AN/GSC-39(V) ELECTRONIC FREQUENCY CONVERTER CV-3655/G (MINI-CONVERTER)
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 1

TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: 1, 186
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31S1-2G-241
TTT: 5
SME OPINION: 5

EQUIPMENT:
HAND TOOLS, MULTIMETER, SWEEP GENERATORS, OSCILLOSCOPE, POWER METER, ATTENUATORS, FREQUENCY COUNTERS, FREQUENCY METERS, SPECTRUM ANALYZER

REFERENCES:
T.O. 31S1-2G-241

CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0297 .00 56.0 56.0 51.0 17.0 3.84

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT VISUALLY ALARM INDICATORS AND METER INDICATIONS
A INJECT RF SIGNAL
A CHECK FOR GAIN, FREQUENCY RESPONSE, BANDWIDTH, AND SPURIOUS NOISE

OSR JOB INVENTORY TASK STATEMENTS:
6 K0297 A PERFORM PMIS ON DOWN CONVERTERS

TASK #: 04380
REMOVE AND REPLACE AN/GSC-39(V) ELECTRONIC FREQUENCY CONVERTER CV-3655/G (MINI-CONVERTER) MODULES
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: ONCE EVERY NINE MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31S1-2G-241
TTT: 5
SME OPINION: 5
EQUIPMENT:
TORQUE WRENCH, SOLDERING IRON, HAND TOOLS
REFERENCES:
T.O. 31S1-2G-241
CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT RELEASED
CUE: RESULT OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0217 .00 35.0 44.0 45.0 25.0 3.73
304X6 K 0304 .00 41.0 49.0 50.0 22.0 3.88
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE MINI-CONVERTER FROM RACK
A REMOVE CABLES AND FASTENERS
A REMOVE AND REPLACE MINI-CONVERTER MODULES
A REPLACE CABLES AND FASTENERS
A REPLACE MINI-CONVERTER IN RACK
OSR JOB INVENTORY TASK STATEMENTS:
6 K0304 A REMOVE OR REPLACE DOWN CONVERTERS
6 I0217 A REMOVE OR REPLACE FREQUENCY CONVERTERS

TASK #: 04390
TROUBLESHOOT AN/GSC-39(V) ELECTRONIC FREQUENCY CONVERTER CV-3655/C AND CV-3654 (MINI-CONVERTER)
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: THREE MONTHS
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, SYSTEM KNOWLEDGE
QTP ADEQUATE: NO, DOES NOT COVER
TNG REFERENCE(S): T.O. 31S1-2G-241
TTT: 5
SME OPINION: 5
EQUIPMENT:
BITE
REFERENCES:
T.O. 31S1-2G-241
CONDITIONS CUES:
COND: ON EQUIPMENT, EQUIPMENT RELEASED
CUE: FAULT INDICATIONS, USER COMPLAINT OF INCREASED DATA TRANSMISSION ERRORS, DCSS MODEMS LOSING SYNCHRONIZATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0201 .00 42.0 51.0 48.0 26.0 5.92
304X6 K 0285 .00 52.0 60.0 59.0 28.0 5.67
ACTIVITIES SKILL KNOWLEDGE:
A DETERMINE FAULT USING CONVERTER BUILT IN TEST SYSTEM
AND T.O. TROUBLESHOOTING CHART
OSR JOB INVENTORY TASK STATEMENTS:
6 K0285 K ISOLATE MALFUNCTIONS IN DOWN CONVERTERS
6 I0201 K ISOLATE MALFUNCTIONS IN FREQUENCY CONVERTERS

TASK #: 04400

TROUBLESHOOT AN/GSC-39(V) ANTENNA GROUP OE-222/G

DUTY CODE: X6

TASK STATUS: 3-K

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: MONTHLY OR EVERY FOUR MONTHS

OJT TRAINABLE: YES, NO, SYSTEM KNOWLEDGE, TEST EQUIPMENT

QTP ADEQUATE: NO, DOES NOT COVER

TNG REFERENCE(S): T.O. 31R5-2G-351 AND T.O. 31R5-2G-132

TTT: 5

SME OPINION: 5

EQUIPMENT:

OSCILLOSCOPE, SIGNAL GENERATOR, VARIABLE ATTENUATOR, POWER METER,

STICK ATTENUATOR, NETWORK ANALYZER, HAND TOOLS, ELECTRONIC TOOL

KIT, CRYOGENIC MAINTENANCE KIT

REFERENCES:

T.O. 31R5-2G-351

T.O. 31R5-2G-132

CONDITIONS CUES:

COND: ON EQUIPMENT OR IN SHOP, EQUIPMENT RELEASED

CUE: FAULT INDICATIONS, FAILURE OF PMI OR OPERATIONAL CHECK,
RESULTS OF TROUBLESHOOTING, AND LOST SATELLITE LINK

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X6	J	0237	.00	13.0	15.0	16.0	11.0	6.45
304X6	K	0284	.00	8.0	17.0	19.0	13.0	7.12

ACTIVITIES SKILL KNOWLEDGE:

K ISOLATE FAULTY SUBSYSTEM

K DETERMINE FAULT USING ANTENNA SUBSYSTEM T.O.

A REMOVE/REPLACE BRAKE ASSEMBLY, CIRCUIT CARDS, AND
PARTS

OSR JOB INVENTORY TASK STATEMENTS:

6 K0284 K ISOLATE MALFUNCTIONS IN CRYOGENIC REFRIGERATION
SYSTEMS

6 J0237 K ISOLATE MALFUNCTIONS IN FEEDHORN ASSEMBLIES

TASK #: 04410

OPERATIONALLY CHECK AN/GSC-39 (V) ANTENNA GROUP

DUTY CODE: X6

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: SEVERAL TIMES A DAY

OJT TRAINABLE: YES, NO, SYSTEM KNOWLEDGE, SAFETY, TEST EQUIPMENT

QTP ADEQUATE: YES

TNG REFERENCE(S): T.O. 31R5-2G-356WC-1 AND T.O. 31R5-2GSC39-6WC-1

TTT: 5

SME OPINION: 5

EQUIPMENT:

SIGNAL GENERATOR, SWEEP GENERATOR, FREQUENCY METERS, FREQUENCY COUNTERS, ANALOG MULTIMETER, OSCILLOSCOPES, POWER METER, SPECTRUM ANALYZER, BIT ERROR RATE TEST SET, NOISE TEST SET, HIGH VOLTAGE PROBE, X-Y RECORDER, POWER SUPPLIES, DIGITAL MULTIMETER SIGNAL GENERATOR, SWEEP GENERATOR, FREQUENCY METERS, FREQUENCY COUNTERS, ANALOG MULTIMETER, OSCILLOSCOPES, POWER METERS, SPECTRUM ANALYZER, BIT ERROR RATE TEST SET, NOISE TEST SET, HIGH VOLTAGE PROBE, X-Y RECORDER, POWER SUPPLIES, DIGITAL MULTIMETER

REFERENCES:

T.O. 31R5-2G-356WC-1

T.O. 31R5-2GSC39WC-1

CONDITIONS CUES:

COND: MAINTENANCE HAZARDOUS CONDITION FOR CRITICAL FUNCTIONS

HIGH VOLTAGE HAZARD

CUE: PMI, AFTER EQUIPMENT REPLACEMENT,

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	IJOB	LENL	5SKL	7SKL	TD	ATI
304X6	K 0278	.00	49.0	52.0	51.0	25.0	4.59	
304X6	L 0403	.00	51.0	52.0	50.0	18.0	4.05	
304X6	K 0297	.00	56.0	56.0	51.0	17.0	3.84	

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM UPCONVERTER GAIN AND COMPRESSION TEST
- A INJECT IF SIGNAL TO UPCONVERTER
- A ADJUST UPCONVERTER GAIN PER T.O. SPECIFICATIONS
- A INJECT IF SIGNAL TO UPCONVERTER
- A MEASURE RF OUTPUT FROM UPCONVERTER FOR PROPER BANDWIDTH AND AMPLITUDE RESPONSE
- A CHECK VOLTAGE OF INTERCONNECT ASSEMBLY FAULT LOGIC CIRCUIT CARD
- A INSERT SIGNAL TO UPCONVERTER INTERCONNECT ASSEMBLY
- A ALIGN INTERCONNECT ASSEMBLY PIN DIODE MOTORIZED ATTENUATOR
- A ADJUST INTERCONNECT ASSEMBLY PIN DIODE ATTENUATION LEVEL
- A ADJUST RF DETECTOR LOCAL OSCILLATOR LEVEL AND FREQUENCY
- A INJECT RF SIGNAL TO UPCONVERTER ASSEMBLY CARRIER LEVEL CONTROL MODULE
- A CHECK CARRIER LEVEL CONTROL ADJUSTS UPCONVERTER OUTPUT POWER AT PROPER LEVEL AND AUTOMATICALLY COMPENSATES FOR VARIANCE IN UPCONVERTER OUTPUT POWER
- A CHECK OPERATION OF WAVEGUIDE SWITCHES, MAINTENANCE LIGHTS, ON/OFF INDICATORS
- A INJECT RF SIGNAL TO IFLA CONTROL PANEL
- A CHECK AMPLITUDE RESPONSE AND GAIN OF IFLA CONTROL PANEL
- A CHECK POWER CONTROL FUNCTIONAL GROUP METER INDICATIONS, CIRCUIT BREAKERS, LINE VOLTAGE REGULATORS, FAULT LAMPS, SHUTDOWN SWITCH AND EMERGENCY OFF SWITCH OPERATION
- A CHECK OPERATION OF FAULT CIRCUITRY OF LOW POWER AMPLIFIER
- A CHECK AC LINE VOLTAGE REGULATION AND OVERRIDE SWITCHES AND MAGNET OVERRIDE SWITCH
- A CHECK LOW POWER AMPLIFIER OPERATING TEMPERATURES AND COOLANT FLOW RATES
- A CHECK VOLTAGE OF BEAM VOLTAGE REGULATOR AND FAULT CIRCUITRY
- A INJECT SINGLE CARRIER SIGNAL TO LOW POWER AMPLIFIER
- A CHECK PROPER GAIN, OUTPUT POWER, REFLECTIVE POWER, INPUT POWER, INTERMEDIATE POWER AMPLIFIER OUTPUT, VOLTAGE STANDING WAVE RATIO (VSWR)
- A CHECK BANDWIDTH OF LOW POWER AMPLIFIER FOR PROPER AMPLITUDE AND RESPONSE
- A CHECK HEAT EXCHANGER SUPPLY PRESSURE, INLET AND OUTLET PURITY, SUPPLY TEMPERATURE, AND NITROGEN PRESSURE, STRAINER CLEANLINESS PRESSURE, STRAINER CLEANLINESS
- A CHECK AIR DRYER VOLTAGE, TANK PRESSURE, AND HUMIDITY ALARM INDICATION
- A CHECK LOW PRESSURE CONTROL PANEL WAVEGUIDE PRESSURE AND NITROGEN PRESSURE

OSR JOB INVENTORY TASK STATEMENTS:

6 K0278 A ALIGN DOWN CONVERTER COMPONENTS FOR REQUIRED OUTPUT LEVELS

6 K0297 A PERFORM PMIS ON DOWN CONVERTERS

6 L0403 A PERFORM PMIS ON UP CONVERTERS

TASK #: 04420

PERFORM OPERATIONAL CHECKS ON AN/GSC-39 (V) UPLINK FUNCTION

DUTY CODE: X6

TASK STATUS: 3-KP

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: SEVERAL TIMES A DAY

OJT TRAINABLE: YES, NO, SYSTEM KNOWLEDGE, SAFETY, TEST EQUIPMENT

QTP ADEQUATE: YES

TNG REFERENCE(S): T.O. 31R5-2G-356WC-1 AND T.O. 31R5-2GSC39-6WC-1

TTT: 5

SME OPINION: 5

EQUIPMENT:

SIGNAL GENERATOR, SWEEP GENERATOR, FREQUENCY METERS, FREQUENCY COUNTERS, ANALOG MULTIMETER, OSCILLOSCOPES, POWER METERS, SPECTRUM ANALYZER, BIT ERROR RATE TEST SET, NOISE TEST SET, HIGH VOLTAGE PROBE, X-Y RECORDER, POWER SUPPLIES, DIGITAL MULTIMETER

REFERENCES:

T.O. 31R5-2G-356WC-1

T.O. 31R5-2GSC39-6WC-1

CONDITIONS CUES:

COND: MAINTENANCE HAZARDOUS CONDITION FOR CRITICAL FUNCTIONS

HIGH VOLTAGE HAZARD

CUE: PMI, AFTER EQUIPMENT REPLACEMENT,

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	IJOB	1ENL	5SKL	7SKL	TD	ATI
304X6	G 0166	.00	48.0	56.0	56.0	33.0	4.73	
304X6	G 0169	.00	25.0	37.0	40.0	22.0	4.32	
304X6	O 0541	.00	13.0	24.0	25.0	12.0	6.37	

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM UPCONVERTER GAIN AND COMPRESSION TEST
- A INJECT IF SIGNAL TO UPCONVENTER
- A ADJUST UPCONVERTER GAIN PER T.O. SPECIFICATIONS
- A INJECT IF SIGNAL TO UPCONVERTER
- A MEASURE RF OUTPUT FROM UPCONVERTER FOR PROPER BANDWIDTH AND AMPLITUDE RESPONSE
- A CHECK VOLTAGE OF INTERCONNECT ASSEMBLY FAULT LOGIC CIRCUIT CARD
- A INSERT SIGNAL TO UPCONVERTER INTERCONNECT ASSEMBLY
- A ALIGN INTERCONNECT ASSEMBLY PIN DIODE MOTORIZED ATTENUATOR
- A ADJUST INTERCONNECT ASSEMBLY PIN DIODE ATTUATION LEVEL
- A ADJUST RF DETECTOR LOCAL OSCILLATOR LEVEL AND FREQUENCY
- A INJECT RF SIGNAL TO UPCONVERTER ASSEMBLY CARRIER LEVEL CONTROL MODULE
- A CHECK CARRIER LEVEL CONTROL
- A ADJUSTS UPCONVERTER OUTPUT POWER
- A CHECK OPERATION OF WAVEGUIDE SWITCHES, MAINTENANCE LIGHTS, ON/OFF INDICATORS
- A INJECT RF SIGNAL TO IFLA CONTROL PANEL
- A CHECK AMPLITUDE RESPONSE AND GAIN OF IFLA CONTROL PANEL
- A CHECK POWER CONTROL FUNCTIONAL GROUP METER INDICATIONS, CIRCUIT BREAKERS, LINE VOLTAGE REGULATORS, FAULT LAMPS, SHUTDOWN SWITCH AND EMERGENCY OFF SWITCH OPERATION
- A CHECK OPERATION OF FAULT CIRCUITRY OF LOW POWER AMPLIFIER
- A CHECK AC LINE VOLTAGE REGULATION AND OVERRIDE SWITCHES AND MAGNET OVERRIDE SWITCH
- A CHECK LOW POWER AMPLIFIER OPERATING TEMPERATURES AND COOLANT FLOW RATES
- A CHECK VOLTAGE OF BEAM VOLTAGE REGULATOR AND FAULT CIRCUITRY
- A INJECT SINGLE CARRIER SIGNAL TO LOW-POWER AMPLIFIER
- A CHECK PROPER GAIN, OUTPUT POWER, REFLECTIVE POWER, INPUT INPUT POWER, INTERMEDIATE POWER AMPLIFIER OUTPUT, VOLTAGE STANDING WAVE RATIO (VSWR)
- A CHECK BANDWITH OF LOW POWER AMPLIFIER FOR PROPER AMPLITUDE AND RESPONSE
- A CHECK HEAT EXCHANGER SUPPLY PRESSURE, INLET AND OUTLET PURITY, SUPPLY TEMPERATURE, AND NITROGEN PRESSURE, STRAINER CLEANLINESS
- A CHECK AIR DRYER VOLTAGE, TANK PRESSURE, AND HUMIDITY ALARM INDICATION
- A CHECK LOW PRESSURE CONTROL PANEL WAVEGUIDE PRESSURE AND NITROGEN PRESSURE

OSR JOB INVENTORY TASK STATEMENTS:

6 G0169 A RUN DIAGNOSTIC TESTS

6 G0166 A PERFORM UPLINK RF FREQUENCY AND LEVEL CHECKS

6 O0541 A PERFORM LINK CHARACTERIZATION TESTS ON MODEMS

6 G0166 A PERFORM UPLINK RF FREQUENCY AND LEVEL CHECKS

TASK #: 04430
 INSPECT AN/GSC-42 AIR FORCE SATELLITE COMMUNICATIONS (AFSATCOM) TERMINAL
 DUTY CODE: X6
 TASK STATUS: 3-KP
 TIMES ANALYZED: 3
 TNOTES:
 CONSEQUENCES: MINOR, DAMAGE, INJURY
 HOW OFTEN: 7, 28, 84, 168
 OJT TRAINABLE: YES
 QTP ADEQUATE: NO, ONLY COVERS BASIC OPERATION, NOT INSPECTION
 TASKS
 TNG REFERENCE(S): QTP 304X6-30W
 TTT: 3
 SME OPINION: 3
 7 DAY INSPECTION IS MAINLY VISUAL/CLEANING; 28 DAY IS MORE
 CLEANING AND OPS CHECK; 84 DAY IS ACTUALLY INSPECTING
 ELECTRICAL COMPONENTS FOR CONDITION; 168 DAY IS BASICALLY
 CLEANING THE WHOLE SYSTEM
 EQUIPMENT:
 CLEANING SUPPLIES (RAGS, Q-TIPS, BRUSHES, ALCOHOL, GENERAL
 PURPOSE CLEANER), VACUUM, ASPIRATOR, TOOL BOX
 REFERENCES:
 T.O. 31R5-2GSC42-6WC-1
 T.O. 31R5-2GSC42-1
 CONDITIONS CUES:
 COND: COMMAND POST, DAY, POWER OFF/ON, SYSTEM RELEASED
 FROM STRATEGIC COMMUNICATION DIVISION (SCD)
 CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA:

	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X6 G	0162	.00	73.0	76.0	72.0	33.0	5.06	
304X6 K	0295	.00	7.0	13.0	15.0	5.0	4.58	
304X6 L	0390	.00	12.0	15.0	18.0	9.0	4.17	

 ACTIVITIES SKILL KNOWLEDGE:
 A CHECK LAMP
 A CHECK PRINTER HEADS
 A CHECK BELTS
 A CHECK FOR CLEANLINESS
 A CHECK BLOWERS
 A CHECK CIRCUIT BREAKERS
 A CHECK ELECTRICAL COMPONENTS (CABLES, WIRING, TERMINAL BOARDS)
 A CHECK EQUIPMENT CASES
 A INSPECT FOR HARDWARE
 A INSPECT CONNECTORS
 A CHECK CAPACITORS
 A INSPECT RELAYS
 A INSPECT SEMI-CONDUCTORS
 A INSPECT JACKS
 A INSPECT SWITCHES
 A INSPECT INDICATOR LAMPS
 A INSPECT PANEL CONTROLS
 A INSPECT PANEL COVERS/CHASSIS
 A INSPECT PRINTED CIRCUIT BOARDS
 A INSPECT TRANSFORMER
 A INSPECT SOLDERED TERMINALS
 A INSPECT OPEN/LACED WIRING
 A INSPECT WIRES
 A INSPECT RESISTORS FOR CRACKED/DAMAGED CASES OR BAD CONNECTIONS
 A INSPECT RF COILS
 A INSPECT GROUNDING RODS FOR PROPER CONNECTIONS AND
 INSTALLATION
 A INSPECT ANTENNA ASSEMBLIES
 A INSPECT RF AMPLIFIER
 A INSPECT TRANSFER/BY-PASS RELAYS
 A INSPECT RF LOAD
 A INSPECT VOLTAGE POWER SUPPLIES
 A INSPECT BANDPASS FILTER
 A INSPECT CIRCUIT BREAKER PANELS
 A INSPECT CONTROL POWER SUPPLY
 A INSPECT EMERGENCY MESSAGE AUDIBLE ALARM
 A INSPECT CONTROL-INDICATOR
 A INSPECT KEY BOARD CONTROL INDICATOR
 A INSPECT TELEPRINTER
 A INSPECT TELEGRAPH MODEM
 A INSPECT MEMORY UNIT
 A INSPECT RADIO RECEIVER TRANSMITTER
 OSR JOB INVENTORY TASK STATEMENTS:
 6 L0390 A PERFORM OPERATIONAL TESTS ON RECEIVER TRANSMITTER CONTROLS
 6 K0295 A PERFORM OPERATIONAL TESTS ON EAM EQUIPMENT
 6 G0162 A PERFORM PREOPERATIONAL OR OPERATIONAL CHECKS OF EQUIPMENT

TASK #: 04440
TROUBLESHOOT AN/GSC-42 AIR FORCE SATELLITE COMMUNICATION(AFSATCOM) TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES
QTP ADEQUATE: NO, ONLY COVERS BASIC OPERATION, NOT TROUBLESHOOT
OR FAULT ISOLATIONS
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 3
BITE ONLY ISOLATES ELECTRICAL MALFUNCTIONS, TECHNICIANS
ISOLATES MECHANICAL MALFUNCTIONS
EQUIPMENT:
BUILT-IN TEST EQUIPMENT (BITE), TOOL BOX, WRIST STRAP
REFERENCES:
T.O. 31R5-2GSC42-1
CONDITIONS CUES:
COND: COMMAND POST, DAY/NIGHT, POWER ON/OFF, SYSTEM RELEASED
FROM STRATEGIC COMMUNICATION DIVISION (SCD)
CUE: PMI FINDINGS, AUDIO/VISUAL ALARMS, QUALITY CONTROL
EVALUATIONS, BITE INDICATIONS RECEIVER-TRANSMITTER
MALFUNCTIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0218 .00 27.0 39.0 43.0 25.0 3.31
304X6 L 0404 .00 12.0 12.0 15.0 10.0 3.44
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY RF AMPLIFIER
K ISOLATE FAULTY VOLTAGE POWER SUPPLIES
K ISOLATE FAULTY BANDPASS FILTER
K ISOLATE FAULTY CIRCUIT BREAKER PANELS
K ISOLATE FAULTY CONTROL POWER SUPPLY
K ISOLATE FAULTY EMERGENCY MESSAGE AUDIBLE ALARM
K ISOLATE FAULTY CONTROL-INDICATOR
K ISOLATE FAULTY KEY BOARD CONTROL INDICATOR
K ISOLATE FAULTY TELEPRINTER
K ISOLATE FAULTY TELEGRAPH MODEM
K ISOLATE FAULTY MEMORY UNIT
K ISOLATE FAULTY RADIO RECEIVER TRANSMITTER
K ISOLATE FAULTY TRANSFER/BY-PASS RELAYS
K ISOLATE FAULTY RF LOAD
OSR JOB INVENTORY TASK STATEMENTS:
6 L0404 A REMOVE OR REPLACE ASR UNITS
6 I0218 A REMOVE OR REPLACE LINE REPLACEABLE UNITS (LRU)

TASK #: 04450
TROUBLESHOOT AN/GSC-42 RF AMPLIFIER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY, SEMI-ANNNAL (OPS CHECK FOR SUPPLY ASSETS)
OJT TRAINABLE: YES
QTP ADEQUATE: NO, ONLY COVERS BASIC OPERATION, NOT TROUBLESHOOT
OR FAULT ISOLATIONS
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BOX, SIGNAL GENERATOR, SPECTRUM ANALYZER, POWER METER,
ATTENUATOR, RADIO BENCH MAINTENANCE TEST SET (AN-URN-205V4)
REFERENCES:
T.O. 12R2-4-201-8-1
T.O. 12R2-2U-262
T.O. 12R2-2U-322
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, EQUIPMENT NOT RELEASED (R/R PART
ON SYSTEM IN FIELD), POWER ON
CUE: PMI FINDINGS, BIT INDICATION, NONE/DISTORTED RECEPTION
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0643 .00 5.0 8.0 10.0 5.0 5.61

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY GAIN
- K ISOLATE FAULTY DISTORTION
- K ISOLATE BAND WIDTH
- K ISOLATE VOLTAGE STANDING WAVE RATIO
- K PERFORM ALGEBRAIC MATH

OSR JOB INVENTORY TASK STATEMENTS:

6 Q0643 K ISOLATE MALFUNCTIONS IN RF DISTRIBUTION AMPLIFIERS

TASK #: 04460

TROUBLESHOOT AN/GSC-42 CONTROL POWER SUPPLY

DUTY CODE: X6

TASK STATUS: 3-K

TIMES ANALYZED: 3

TNOTES:

CONSEQUENCES: MINOR OR MAJOR, DAMAGE, INJURY

HOW OFTEN: ANNUALLY OR EVERY OTHER YEAR

OJT TRAINABLE: YES

QTP ADEQUATE: NO, ONLY COVERS BASIC OPERATION, NOT TROUBLESHOOT
OR FAULT ISOLATIONS

TNG REFERENCE(S): QTP 304X6-30W

TNG: 3

SME OPINION: 5

EQUIPMENT:

OSCILLOSCOPE, DIGITAL MULTIMETER, LOGIC STATE ANALYZER,
TOOL BOX, ESD WRIST STRAP

REFERENCES:

T.O. 12R2-2A-422

T.O. 12R2-4-201-8-1

CONDITIONS CUES:

COND: AFSAT SHOP, DAY/NIGHT, POWER ON

CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, TELEPRINTER
MALFUNCTIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0634 .00 15.0 16.0 19.0 11.0 5.54

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY CIRCUIT CARDS
- K ISOLATE FAULTY AC/DC CIRCUITS
- A REMOVE/REPLACE CIRCUIT CARDS

OSR JOB INVENTORY TASK STATEMENTS:

6 Q0634 K ISOLATE MALFUNCTIONS IN GENERAL PURPOSE POWER SUPPLIES

TASK #: 04470
TROUBLESHOOT AN/GSC-42 EMERGENCY ACTION MESSAGE ALARM
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 3
EQUIPMENT:
RADIO MAINTENANCE TEST BENCH SET (URM-205(V) 3), TOOL BOX,
SOLDERING KIT
REFERENCES:
T.O. 12R2-4-201-8-1
T.O. 12R2-2U-252
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON/OFF
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, NO AUDIO TONE,
CANNOT TURN EMERGENCY ACTION MESSAGE ALARM OFF
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0292 .00 6.0 8.0 9.0 3.0 5.12
304X6 K 0294 .00 4.0 9.0 10.0 4.0 5.13
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARD
A REMOVE/REPLACE CIRCUIT CARD.
OSR JOB INVENTORY TASK STATEMENTS:
6 K0292 K ISOLATE MALFUNCTIONS TO EMERGENCY ACTION MESSAGE
(EAM) ALARMS
6 K0294 K ISOLATE MALFUNCTIONS WITHIN EAM EQUIPMENT

TASK #: 04480
TROUBLESHOOT AN/GSC-42 CONTROL-INDICATOR
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY OR QUARTERLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 3
THIS CONTROL-INDICATOR IS THE DIAGNOSTICS OR BITE FOR THE
WHOLE AN/GSC-42 SYSTEM
EQUIPMENT:
TEST BENCH, OSCILLOSCOPE, DUAL MODEM TEST SET, DIGITAL
MULTIMETER, TOOL BOX, ESD WRIST STRAPS
REFERENCES:
T.O. 12R2-2A-492
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON/OFF
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, BITE WON'T
FUNCTION PROPERLY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 O 0527 .00 12.0 16.0 18.0 5.0 6.09
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARDS
A REMOVE OR REPLACE CIRCUIT CARDS OR PARTS
OSR JOB INVENTORY TASK STATEMENTS:
6 00527 K ISOLATE MALFUNCTIONS TO DUAL MODEM CONTROLS

TASK #: 04490
TROUBLESHOOT AN/GSC-42 TELEPRINTER
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR OR MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, R/R IS TO TECHNICAL
QTP ADEQUATE: NO, ONLY COVERS BASIC OPERATION AND NOT
REMOVE/REPLACE TASKS
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 5
EQUIPMENT:
TELEPRINTER TEST SET, BENCH TEST SET (URN-205), DIGITAL
MUTIMETER, PRINT HEAD ALIGNMENT SET, TOOL BOX, SOLDER KIT,
ESD WRIST STRAP
REFERENCES:
T.O. 12R2-4-201-8-1
T.O. 12R2-2A-422
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON/OFF
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATIONS, TELEPRINTER NOT
PRINTING CORRECTLY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0337 .00 7.0 12.0 14.0 8.0 5.48
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY PRINTER
K ISOLATE FAULTY CIRCUIT CARD
K ISOLATE FAULTY MODULES
K ISOLATE FAULTY SYNCHRO-SERVO
K ISOLATE FAULTY PRINT HEAD
K ISOLATE FAULTY HAMMER ASSEMBLY
K ISOLATE FAULTY BELTS
K ISOLATE FAULTY SWITCHES
K ISOLATE FAULTY FAN
A REMOVE/REPLACE MODULES, CIRCUIT CARDS, AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
6 L0337 K ISOLATE MALFUNCTIONS TO AUTOMATIC SEND/RECEIVE (ASR)
UNITS

TASK #: 04500
ALIGN/ADJUST AN/GSC-42 TELEPRINTER
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR OR MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL BOX, PRINT HEAD ALIGNMENT SET, TEST BENCH, DIGITAL
MUTIMETER
REFERENCES:
T.O. 12R2-2A-422
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, RATCHETING,
PCOR PRINTING QUALITY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0618 .00 1.0 3.0 3.0 1.0 5.57
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST SYNCRO-SERVO
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0618 A ALIGN HIGH SPEED PRINTERS

TASK #: 04510
TROUBLESHOOT AN/GSC-42 TELEGRAPH MODEM
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR OR MINOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 5
EQUIPMENT:
DUAL MODEM TEST SET, OSCILLOSCOPE, FREQUENCY COUNTER, SIGNAL GENERATOR, POWER METER, DIGITAL MULTIMETER, TOOL CHEST
REFERENCES:
T.O. 12R2-2A-492
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON/OFF
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, BIT INDICATION, TRANSMITTER-RECEIVER FAULTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 0 0539 .00 43.0 47.0 47.0 20.0 5.46
304X6 0 0541 .00 13.0 24.0 25.0 12.9 6.37
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARDS
K ISOLATE FAULTY LOGIC CIRCUITS
A REMOVE/REPLACE CIRCUIT CARDS
OSR JOB INVENTORY TASK STATEMENTS:
6 00539 A PERFORM BIT ERROR RATE TESTS ON MODEMS
6 00541 A PERFORM LINK CHARACTERIZATION TESTS ON MODEMS

TASK #: 04520
TROUBLESHOOT AN/GSC-42 MEMORY UNIT
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 5
EQUIPMENT:
DUAL MODEM TEST SET, OSCILLOSCOPE, FREQUENCY COUNTER, SIGNAL GENERATOR, POWER METER, DIGITAL MULTIMETER, TOOL CHEST, ESD WRIST STRAP
REFERENCES:
T.O. 12R2-2A-492
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON, EQUIPMENT NOT RELEASED
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, BITE INDICATIONS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 0 0527 .00 12.0 16.0 18.0 5.0 6.09
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY INTEGRATED CIRCUITS
A REMOVE/REPLACE INTEGRATED CIRCUITS
OSR JOB INVENTORY TASK STATEMENTS:
6 00527 K ISOLATE MALFUNCTIONS TO DUAL MODEM CONTROLS

TASK #: 04530
TROUBLESHOOT AN/GSC-42 RADIO RECEIVER-TRANSMITTER
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR OR MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 3
EQUIPMENT:
DUAL MODEM TEST SET, TEST BENCH, OSCILLOSCOPE, TOOL BOX,
ESD WRIST STRAP
REFERENCES:
T.O. 12R2-4-201-8-1
T.O. 12R2-2A-412
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON/OFF
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, PROBLEMS
TRANSMITTING/RECEIVING
JOB STANDARDS:
JAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 N 0508 .00 18.0 27.0 28.0 16.0 5.28
304X6 N 0512 .00 11.0 21.0 23.0 15.0 6.14
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARDS
K ISOLATE FAULTY MODULES
K ISOLATE FAULTY POWER SUPPLIES
A REMOVE/REPLACE MODULES, CIRCUIT CARDS, AND PARTS
OSR JOB INVENTORY TASK STATEMENTS:
6 N0508 K ISOLATE MALFUNCTIONS TO RECEIVER-TRANSMITTER (RT)
SUBSYSTEMS
6 N0512 K ISOLATE MALFUNCTIONS WITHIN RT SUBSYSTEMS

TASK #: 04540
ALIGN/ADJUST AN/GSC-42 RADIO RECEIVER/TRANSMITTER
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR OR MINOR/DAMAGE/INJURY
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES
QTP ADEQUATE: NO, JUST GENERAL SYSTEM TAUGHT IN QTP
TNG REFERENCE(S): QTP 304X6-30I
TTT: 3
SME OPINION: 5
EQUIPMENT:
TEST BENCH, DIGITAL MULTIMETER, TOOL BOX, SIGNAL GENERATOR,
FREQUENCY COUNTER, POWER METER, DISTORTION ANALYZER, AUDIO
OSCILLATOR
REFERENCES:
T.O. 12R2-4-201-8-1
T.O. 12R2-2A-412
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, DEGRADED
RECEIVER-TRANSMITTER SIGNAL, INCORRECT WAVEFORMS
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0277 .00 13.0 18.0 18.0 5.0 4.35
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST RESISTORS
A ADJUST CAPACITOR
A ADJUST OSCILLATORS
S USE TEST BENCH
S USE POWER METER
S USE DISTORTION ANALYZER
S USE AUDIO OSCILLATOR
OSR JOB INVENTORY TASK STATEMENTS:
6 K0277 A ADJUST ULTRA HIGH FREQUENCY (UHF) RECEIVE RADIO
FREQUENCY (RF) AMPLIFIER COMPONENTS

TASK #: 04550
TROUBLESHOOT AN/GSC-42 VOLTAGE POWER SUPPLY
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR OR MINOR, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 5
EQUIPMENT:
TEST BENCH, DIGITAL MULTIMETER, TOOL BOX, ESD WRIST STRAP
REFERENCES:
T.O. 12R2-4-201-8-1
T.O. 31R2-2G-211
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON
CUE: PHI FINDINGS, QUALITY CONTROL EVALUATION, GSC-42 SYSTEM
MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0634 .00 15.0 16.0 19.0 11.0 5.54 1.0
ACTIVITIES SKILL KNOWLEDGE:
K ISOLATE FAULTY CIRCUIT CARDS
A REMOVE/REPLACE CIRCUIT CARDS
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0634 K ISOLATE MALFUNCTIONS IN GENERAL PURPOSE POWER SUP-
PLIES

TASK #: 04560
ALIGN/ADJUST AN/GSC-42 VOLTAGE POWER SUPPLY
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: ANNUALLY
OJT TRAINABLE: YES
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30W
TTT: 3
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, TOOL BOX, TEST BENCH
REFERENCES:
T.O. 31R2-2G-211
T.O. 31R2-4-477-1
CONDITIONS CUES:
COND: AFSAT SHOP, DAY/NIGHT, POWER ON
CUE: PHI FINDINGS, QUALITY CONTROL EVALUATION, VOLTAGE LEVELS
OUT OF TOLERANCE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0317 .00 20.0 28.0 28.0 15 5.84
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST RESISTORS POTS
OSR JOB INVENTORY TASK STATEMENTS:
6 L0317 A ALIGN HIGH VOLTAGE POWER SUPPLY COMPONENTS

TASK #: 04570
INSPECT THE AN/GSC-44 CONSOLIDATED GROUND TERMINAL
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: 7, 14, 28, 84, 168
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC-116WC-1
TTT: 5
SME OPINION: 3
FOUR PMI'S ARE COVERED IN THIS TASK:
WEEKLY - BRIEF CHECK OF SYSTEM INTEGRITY (30 MIN; SYSTEM
REMAINS ONLINE)
MONTHLY - LIGHT CLEANING PLUS SYSTEM INTEGRITY (30 MIN; SYSTEM
REMAINS ONLINE)
QUARTERLY - MORE THOROUGH (4 HOURS; SYSTEM RENDERED INOPERATIVE)
SEMIANNUAL - THE MOST THOROUGH (4 HOURS; SYSTEM RENDERED INOPERA-
TIVE)
DATA SHOWN ARE FOR THE SEMIANNUAL INSPECTION.
NO TESTS ARE PERFORMED DURING THE INSPECTIONS. THE SELF-CHECKS A
LRU LEVEL ARE OBSERVED.

EQUIPMENT:
VACUUM CLEANER, ALCOHOL, ACID BRUSHES, SOAP AND WATER,
LINT-FREE CLOTHS, COMMON HANDTOOLS, LOG

REFERENCES:
T.O. 31R5-2GSC-116WC-1

CONDITIONS CUES:
COND: IN SHOP, EQUIPMENT MAY HAVE TO BE OUT OF SERVICE
CUE: PMI

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0295 .00 7.0 13.0 15.0 5.0 4.58
304X6 L 0383 .00 7.0 11.0 13.0 6.0 4.75
304X6 L 0390 .00 12.0 15.0 18.0 9.0 4.17

ACTIVITIES SKILL KNOWLEDGE:
A CLEAN INTERIOR/EXTERIOR OF EQUIPMENT
A LUBRICATE EQUIPMENT
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN FILTERS
A CHECK SYSTEM OPERATION

OSR JOB INVENTORY TASK STATEMENTS:
6 L0383 A PERFORM OPERATIONAL TESTS ON DCSUS
6 K0295 A PERFORM OPERATIONAL TESTS ON EAM EQUIPMENT
6 L0390 A PERFORM OPERATIONAL TESTS ON RECEIVER TRANSMITTER
CONTROLS

TASK #: 04580
ALIGN AND ADJUST AN/GSC-44 CONSOLIDATED GROUND TERMINAL TEST TRANSLATOR
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 1

TNOTES:
CONSEQUENCES: NONE, NONE, INJURY
HOW OFTEN: TWO YEARS
OJT TRAINABLE: YES, YES
QTP ADEQUATE:
TNG REFERENCE(S): T.O. 31R5-2GSC-111-2
TTT: 5
SME OPINION: 5

EQUIPMENT:
POWER METER, SPECTRUM ANALYZER, SIGNAL GENERATOR, STEP ATTENUATOR

REFERENCES:
T.O. 31R5-2GSC-111-2

CONDITIONS CUES:
COND: IN SHOP, TEST TRANSLATOR OUT OF SERVICE
CUE: RESULTS OF FAULT ISOLATE USING THE TEST TRANSLATOR

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0612 .00 24.0 25.0 24.0 8.0 4.98

ACTIVITIES SKILL KNOWLEDGE:
A CHECK OUTPUT OF TEST TRANSLATOR COUPLER
A ADJUST COUPLER OUTPUT

OSR JOB INVENTORY TASK STATEMENTS:
6 Q0612 A ALIGN BUILT-IN TEST EQUIPMENT (BITE) COMPONENTS

TASK #: 04590
TROUBLESHOOT AN/GSC-44 CONSOLIDATED GROUND TERMINAL
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2

TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: N/A
TNG REFERENCE(S): SEE REFERENCES
TTT: 5
SME OPINION: 5
BUILT-IN FAULT INDICATORS DO NOT ALWAYS IDENTIFY FAULT
CORRECTLY. A SUPPLY POINT WITH REPLACEMENT LRU'S IS LOCATED
IN THE TERMINAL ENCLOSURE.

EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, SIGNAL GENERATOR, POWER METER,
ATTENUATOR, FREQUENCY COUNTER, SPECTRUM ANALYZER, HANDTOOLS

REFERENCES:
T.O. 31R5-2GRC-111-1
T.O. 31R5-2GSC-111-2
T.O. 31R2-2G-211
T.O. 31R2-2G-281
T.O. 31R2-4-476-1
T.O. 31R2-4-477-1
T.O. 31R2-4-478-1
T.O. 31R2-4-479-1
T.O. 31R2-4-480-1
T.O. 31R2-4-481-1-1
T.O. 31R2-4-481-1-2
T.O. 31R2-4-483-1
T.O. 31R5-2G-301
T.O. 31R5-2G-311
T.O. 31R5-2G-321
T.O. 31R5-4-193-1
T.O. 31S5-2UYQ23-1
T.O. 31S5-2UYQ23-1-1

CONDITIONS CUES:
COND: IN SHOP OR IN TERMINAL ENCLOSURE, USUALLY IN SERVICE
CUE: USER COMPLAINT

JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0290 .00 7.0 13.0 14.0 6.0 5.70
304X6 Q 0645 .00 8.0 16.0 19.0 11.0 5.44

ACTIVITIES SKILL KNOWLEDGE:
A CHECK FAULT INDICATION PANELS
A PERFORM BITE TESTS
A PERFORM OPERATIONAL TESTS
K ISOLATE FAULTY LINE REPLACEABLE UNITS
A REMOVE AND REPLACE LRU
A REMOVE AND REPLACE MINOR HARDWARE

OSR JOB INVENTORY TASK STATEMENTS:
6 Q0645 K ISOLATE MALFUNCTIONS IN SATELLITE SYSTEMS USING RF TO
RF TEST TRANSLATORS
6 K0290 K ISOLATE MALFUNCTIONS IN UHF RECEIVE RF AMPLIFIERS

TASK #: 04600
OPERATE THE AN/GSC-44 CONSOLIDATED GROUND TERMINAL
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: WEEKLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC-111-1 AND 31R5-2GSC-111-2
TTT: 3
SME OPINION: 3
REFERENCES:
T.O. 31R5-2GSC-111-1
T.O. 31R5-2GSC-111-2
CONDITIONS CUES:
COND: AT OPERATOR'S CONSOLE
CUE: PMI, RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0159 .00 5.0 9.0 10.0 4.0 6.09
304X6 H 0184 .00 1.0 3.0 6.0 4.0 5.69
304X6 L 0388 .00 5.0 9.0 11.0 6.0 4.27
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM POWER UP PROCEDURES
A PERFORM INITIAL PROGRAM LOAD
A PERFORM OPERATIONAL CHECKS
A PERFORM MESSAGE COMPOSITION PROCEDURES
A PERFORM MESSAGE TRANSMISSION PROCEDURES
OSR JOB INVENTORY TASK STATEMENTS:
6 H0184 A PERFORM COMMUNICAITONS SUPERVISORY COMMANDS
6 G0159 A PERFORM EMERGENCY MESSAGE PROCESSOR UNIT (MPU) BY-PASSES (DEGRADATION PROCEDURES)
6 L0388 A PERFORM OPERATIONAL TESTS ON MESSAGE PROCESSOR CONTROLS

TASK #: 04610
INSPECT AN/GSC-44 PECULIAR SUPPORT EQUIPMENT
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: 30
OJT TRAINABLE: YES, NO (TASK REQUIRES BASIC ELECTRONICS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): LOCAL WORK CARDS
TTT:
SME OPINION: 3
TWO CATEGORIES: PMI EVERY 30 DAYS, AND INSPECTION UPON RECEIPT
DATA PROVIDED APPLIES TO A VARIETY OF TEST STATIONS
EQUIPMENT:
DIGITAL MULTIMETER, OSCILLOSCOPE, COMMON HAND TOOLS, ALCOHOL,
COMPRESSED AIR, LOG
REFERENCES:
LOCAL WORK CARDS
CONDITIONS CUES:
CONDITIONS: SHOP
CUES: UPON RECEIPT AND EVERY 30 DAYS
JOB STANDARDS:
IN ACCORDANCE WITH TECH DATA
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0153 .00 72.0 75.0 72.0 44.0 5.10
ACTIVITIES SKILL KNOWLEDGE:
A CHECK POWER-ON FUNCTION
A DISASSEMBLE
A CHECK FOR BURNED COMPONENTS
A CHECK FOR ELECTRICAL INTERFERENCE
A CLEAN UNIT
A REASSEMBLE
A LOG COMPLETED INSPECTION
A PERFORM SIGNAL CHECKS
K ANNOTATE LOGS
OSR JOB INVENTORY TASK STATEMENTS:
6 G0153 A OBSERVE TEST EQUIPMENT, SUCH AS OSCILLOSCOPES, TO DETERMINE EQUIPMENT OPERATION OR SIGNAL QUALITY

TASK #: 0462C
BENCHCHECK AN/GSC-44 LOW-SPEED TELEPRINTER (AN/UGC-120)
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W4-2-131
TTT:
SME OPINION: 3
THE AN/USM-46 TEST SET USED FOR THIS TEST IS USED FOR 10
DIFFERENT LRU'S
EQUIPMENT:
SATELLITE COMMUNICATIONS GROUP TEST SET, COMMON HANDTOOLS,
POWER SUPPLY, OSCILLOSCOPE, PULSE GENERATOR, EXTENDER CARD,
POWER SUPPLY EXTENDER CABLE, PRINT HEAD ALIGNMENT PANEL, CABLE
ASSEMBLY, MOTOR DRIVER CARD TEST FIXTURE, ANALOG MULTIMETER,
DIGITAL MULTIMETER, DIGITAL LOGIC PROBE, SOLDERING KIT
REFERENCES:
T.O. 31W4-2-131
CONDITIONS CUES:
CONDITIONS: SHOP
CUE: MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0671 .00 8.0 8.0 10.0 5.0 3.95
ACTIVITIES SKILL KNOWLEDGE:
A CONNECT PRINTER TO TEST SET
A INSTALL SOFTWARE
A RESPOND TO PROMPTS IN TESTING SEQUENCE
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0671 A PERFORM PMIS ON LOW SPEED PRINTERS

TASK #: 04630
BENCHCHECK AN/GSC-44 HIGH-SPEED PRINTER
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31S5-4-77-2
TTT:
SME OPINION: 3
USES AN/USM-46 TEST SET
EQUIPMENT:
SATELLITE COMMUNICATIONS GROUP TEST SET, PULL GAUGE,
POWER SUPPLY, OSCILLOSCOPE, PULSE GENERATOR, EXTENDER CARD,
POWER SUPPLY EXTENDER CABLE, PRINT HEAD ALIGNMENT PANEL, CABLE
ASSEMBLY, MOTOR DRIVER CARD TEST FIXTURE, COMMON HAND TOOLS
ANALOG MULTIMETER, DIGITAL MULTIMETER, DIGITAL LOGIC PROBE
SOLDERING KIT
REFERENCES:
T.O. 31S5-4-77-2
CONDITIONS CUES:
CONDITIONS: SHOP
CUES: MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0655 .00 5.0 8.0 10.0 3.0 4.27
304X6 Q 0621 .00 4.0 5.0 4.0 3.0 5.47
ACTIVITIES SKILL KNOWLEDGE:
A CONNECT PRINTER TO TEST SET
A INSTALL SOFTWARE
A RESPOND TO PROMPTS IN TESTING SEQUENCE
S OPERATE PULL GAUGE
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0621 A ALIGN LOW SPEED PRINTERS
6 Q0655 K ISOLATE MALFUNCTIONS TO HIGH SPEED PRINTERS

TASK #: 04640
BENCHCHECK AN/GSC-44 RECEIVER/TRANSMITTER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-2A-412
TTT:
SME OPINION: 3
TROUBLESHOOTING AND REPAIR IS ONLY TAKEN TO THE MODULE LEVEL
EQUIPMENT:
OSCILLOSCOPE, WAVEFORM GENERATOR, RF TEST SET, POWER METER,
SIGNAL GENERATOR, QUARTZ OSCILLATOR, ATTENUATOR, RF BOLOMETER,
DISTORTION ANALYZER, RF VOLTMETER, R/T TEST SET, POWER FACTOR
METER, COMMON HAND TOOLS, DIGITAL MULTIMETER, FREQUENCY COUNTER
REFERENCES:
T.O. 12R2-2A-412
CONDITIONS CUES:
CONDITION: SHOP
CUES: MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 N 0503 .00 18.0 27.0 28.0 16.0 5.28
304X6 N 0509 .00 21.0 30.0 31.0 16.0 5.18
304X6 N 0512 .00 11.0 21.0 23.0 15.0 6.14
ACTIVITIES SKILL KNOWLEDGE:
A CONNECT UNIT TO TEST SET
A RESPOND TO PROMPTS IN TESTING SEQUENCE
OSR JOB INVENTORY TASK STATEMENTS:
6 N0508 K ISOLATE MALFUNCTIONS TO RECEIVER-TRANSMITTER (RT)
SUBSYSTEMS

TASK #: 04650
BENCHCHECK AN/GSC-44 MODEM
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 12R2-2U-142
TTT:
SME OPINION: 3
EQUIPMENT:
RF MILLIVOLT METER, OSCILLOSCOPE, DIGITAL MULTIMETER, FREQUENCY
COUNTER, ATTENUATORS, MODEM TEST SET, POWER FACTOR METER, RF
BOLOMETER, HP DATA ERROR ANALYZER, COMMON HAND TOOLS
DIGITAL LOGIC PROBE, FIELD STRENGTH TESTER, SOLDERING KIT
REFERENCES:
T.O. 12R2-2U-142
CONDITIONS CUES:
CONDITION: SHOP
CUES: MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 M 0469 .00 3.0 5.0 6.0 2.0 5.44 1.0
ACTIVITIES SKILL KNOWLEDGE:
A CONNECT MODEM TO TESTER
A VERIFY SWITCH SETTINGS
A ISOLATE FAULT
A SEND TO DEPOT IF FAULT CANNOT BE FOUND OR IF LEVEL OF
MAINTENANCE EXCEEDS REPAIR AUTHORITY
S PERFORM RESISTANCE CHECKS
OSR JOB INVENTORY TASK STATEMENTS:
6 M0469 K ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT KEYERS

TASK #: 04660
INSPECT AN/GSC-49 SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 1, 7, 28, 84,168, 336, 356
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC49-2-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
EYE SHIELD, HARD HAT, GLOVES, SPECTRUM ANALYZER, OSCILLOSCOPE,
VOLTMETER, FREQUENCY COUNTER, DATA ERROR ANALYZER, ANALOG
MULTIMETER, DIGITAL MULTIMETER, COMMON HANDTOOLS
REFERENCES:
T.O. 31R5-2GSC49-2-1
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 J 0253 .00 28.0 33.0 31.0 9.0 4.40
304X6 L 0395 .00 23.0 21.0 21.0 9.0 3.71
304X6 Q 0666 .00 17.0 22.0 20.0 6.0 4.02
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT VISUALLY LIGHTBULBS, DOOR AND AIR VENT COVERS
A INSPECT VISUALLY GROUND STRAPS, CABLES AND CONNECTIONS
A INSPECT VISUALLY POWER TRANSFER SWITCH
A CLEAN CONTROL PANELS
A INSPECT VISUALLY HARDWARE
A CLEAN AIR FILTERS
A LUBRICATE ANTENNAS
A CLEAN ANTENNAS
A INSPECT VISUALLY ANTENNAS
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0666 A PERFORM PMIS ON DISTRIBUTION AMPLIFIERS
6 J0253 A PERFORM PMIS ON PARABOLIC ANTENNAS
6 L0395 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
AIR COOLING SYSTEMS

TASK #: 04670
OPERATIONALLY CHECK AN/GSC-49 SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: 1
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC49-2-1
TTT: 3
SME OPINION: 3
REFERENCES:
T.O. 31R5-2GSC49-2-1
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI, EVERY 8 HOURS DURING OPERATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0162 .00 73.0 76.0 72.0 33.0 5.06
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT VISUALLY TRANSMITTER POWER OUTPUT LEVEL
A INSPECT VISUALLY UPCONVERTER FREQUENCY
A INSPECT VISUALLY RECEIVING LEVEL
A INSPECT VISUALLY CRYPTO LIGHT
A INSPECT VISUALLY ANTENNA DEHYDRATOR ASSEMBLY, DEHYDRATOR ASSEMBLY CONTROL PANEL LINE PRESSURE GAUGE, AND FEED ASSEMBLY PRESSURE CONTROL PANEL PRESSURE GAUGE
OSR JOB INVENTORY TASK STATEMENTS:
6 G0162 A PERFORM PREOPERATIONAL OR OPERATIONAL CHECKS OF EQUIPMENT

TASK #: 04680
ADJUST AN/GSC-49 CESIUM BEAM FREQUENCY STANDARD
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: DAILY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): HEWLETT-PACKARD 5061A USERS MANUAL
TTT: 5
SME OPINION: 3
EQUIPMENT:
COMMON HANDTOOLS
REFERENCES:
HEWLETT-PACKARD 5061A USERS MANUAL
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: CESIUM CLOCK VISUAL ALARM
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0605 .00 11.0 21.0 23.0 13.0 5.43
ACTIVITIES SKILL KNOWLEDGE:
A APPLY POWER TO UNIT
A SET CONTROLS FOR ADJUSTMENT
A ADJUST LOOP GAIN
A SET SWITCHES FOR OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0605 A ADJUST CESIUM BEAM FREQUENCY STANDARDS

TASK #: 04670
OPERATIONALLY CHECK AN/GSC-49 SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: 1
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC49-2-1
TTT: 3
SME OPINION: 3
REFERENCES:
T.O. 31R5-2GSC49-2-1
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI, EVERY 8 HOURS DURING OPERATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0162 .00 73.0 76.0 72.0 33.0 5.06
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT VISUALLY TRANSMITTER POWER OUTPUT LEVEL
A INSPECT VISUALLY UPCONVERTER FREQUENCY
A INSPECT VISUALLY RECEIVING LEVEL
A INSPECT VISUALLY CRYPTO LIGHT
A INSPECT VISUALLY ANTENNA DEHYDRATOR ASSEMBLY, DEHYDRATOR ASSEMBLY CONTROL PANEL LINE PRESSURE GAUGE, AND FEED ASSEMBLY PRESSURE CONTROL PANEL PRESSURE GAUGE
OSR JOB INVENTORY TASK STATEMENTS:
6 G0162 A PERFORM PREOPERATIONAL OR OPERATIONAL CHECKS OF EQUIPMENT

TASK #: 04680
ADJUST AN/GSC-49 CESIUM BEAM FREQUENCY STANDARD
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: DAILY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): HEWLETT-PACKARD 5061A USERS MANUAL
TTT: 5
SME OPINION: 3
EQUIPMENT:
COMMON HANDTOOLS
REFERENCES:
HEWLETT-PACKARD 5061A USERS MANUAL
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: CESIUM CLOCK VISUAL ALARM
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI

TASK #: 04690
TUNE AN/GSC-49 KLYSTRON CAVITY
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 3 MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC49-2-1
TTT: 5
SME OPINION: 3
REFERENCES:
T.O. 31R5-2GSC49-2-1
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: CHANGE OF INPUT FREQUENCY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
300X6 L 0319 .00 15.0 25.0 25.0 15.0 6.77
ACTIVITIES SKILL KNOWLEDGE:
A TUNE ASSIGNED FREQUENCY
A TUNE KLYSTRON CAVITIES AS REQUIRED BY CALIBRATION
CHART
OSR JOB INVENTORY TASK STATEMENTS:
6 L0319 A ALIGN SUPER HIGH FREQUENCY (SHF) TRANSMITTERS

TASK #: 04700
TUNE AN/GSC-49 POWER SUPPLIES
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: 4 MONTHS
OJT TRAINABLE: YES, NO, HIGH VOLTAGE SAFETY AND TEST EQUIP USE
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC49-2-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, HANDTOOLS
REFERENCES:
T.O. 31R5-2GSC49-2-1
CONDITIONS CUES:
COND: ON EQUIPMENT, POWER ON, HIGH VOLTAGE HAZARD
CUE: AFTER REPLACEMENT OF HIGH OR LOW VOLTAGE CARDS OR
KLYSTRON
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0317 .00 20.0 28.0 28.0 15.0 5.84
304X6 Q 0617 .00 9.0 11.0 14.0 8.0 4.69
ACTIVITIES SKILL KNOWLEDGE:
A CONNECT MULTIMETER TO RF AMPLIFIER
A SET POWER SUPPLY CONTROLS AS DIRECTED
A ADJUST LOW VOLTAGE POWER SUPPLY
A REPEAT FOR HIGH VOLTAGE POWER SUPPLY
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0617 A ALIGN GENERAL PURPOSE POWER SUPPLY COMPONENTS
6 L0317 A ALIGN HIGH VOLTAGE POWER SUPPLY COMPONENTS

TASK #: 04710
TROUBLESHOOT AN/GSC-49 HIGH VOLTAGE POWER SUPPLY
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, NONE, INJURY
HOW OFTEN: 2 MONTHS
OJT TRAINABLE: YES, NC, SAFETY, BASIC ELECTRONICS, TEST
EQUIPMENT USE
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC49-2-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, HANDTOOLS
REFERENCES:
T.O. 31R5-2GSC49-2-1
CONDITIONS CUES:
COND: ON EQUIPMENT, POWER ON, HIGH VOLTAGE HAZARD
CUE: POWER METER INDICATION AND/OR VISUAL FAULT STATUS INDICATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK YE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0329 .00 27.0 37.0 38.0 22.0 6.27
ACTIVITIES SKILL KNOWLEDGE:
A RESET FAULT INDICATOR
A REPLACE MODULE AS INDICATED BY TO WITH KNOWN GOOD
MODULE
A TEST MODULE
OSR JOB INVENTORY TASK STATEMENTS:
6 L0329 K ISOLATE MALFUNCTIONS IN HIGH VOLTAGE POWER SUPPLIES

TASK #: 04720
REMOVE AND REPLACE AN/GSC-49 CIRCUIT CARDS
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 2 MONTHS
OJT TRAINABLE: YES, NO, SAFETY, BASIC ELECTRONICS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2GSC49-2-1 AND 31R5-2GSC49-2-2
TTT: 5
SME OPINION: 3
EQUIPMENT:
HAND TOOLS
REFERENCES:
T.O. 31R5-2GSC49-2-1
T.O. 31R5-2GSC49-2-2
CONDITIONS CUES:
COND: ON EQUIPMENT, HIGH VOLTAGE HAZARD
CUE: RESULTS OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0199 .00 34.0 42.0 43.0 24.0 2.83
304X6 R 0710 .00 35.0 27.0 22.0 5.0 4.40
ACTIVITIES SKILL KNOWLEDGE:
A POWER DOWN EQUIPMENT
A PULL SUBASSEMBLY
A REMOVE AND REPLACE CIRCUIT CARD OR COMPONENT
A REPLACE SUBASSEMBLY
A POWER UP EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
6 R0710 A INSTALL OR REMOVE MOBILE COMMUNICATION EQUIPMENT
6 I0199 A INSTALL OR REMOVE MOUNTING HARDWARE

TASK #: 04730
PREPARE AN/GSC-49 EIGHT HOUR STATUS REPORTS
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: NONE, NONE, NONE
HOW OFTEN: EIGHT HOURS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): DEFENSE COMMUNICATIONS AGENCY (DCA) CIRCULARS
TTT: 5
SME OPINION: 3
EQUIPMENT:
SPECTRUM ANALYZER
REFERENCES:
DEFENSE COMMUNICATIONS AGENCY (DCA) CIRCULARS
CONDITIONS CUES:
COND: DURING OPERATION ONLY
CUE: REQUESTED BY NETWORK CONTROLLERS
JOB STANDARDS:
IAW REFERENCES
JSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 E 0124 .00 19.0 22.0 19.0 13.0 4.26
ACTIVITIES SKILL KNOWLEDGE:
A RECORD POWER OUT AND INTERFACE UNIT DISPLAY INFORMATION
A RECORD KY-883 ERROR RATE COUNT INFORMATION
A REPORT STATUS UPDATE ON UGC-74 TELETYPE
A RECALL STATUS DISPLAY MEANING
A RECALL OPERATOR LANGUAGE MEANING
OSR JOB INVENTORY TASKS:
6 E0124 PREPARE STATUS REPORTS

TASK #: 04740

SET UP AN/GSC-49 SINGLE CARRIER FEED QE-361(V) ANTENNA GROUP

DUTY CODE: X6

TASK STATUS: 3-K

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, INJURY

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2G-321

TTT: 5

SME OPINION: 3

EQUIPMENT:

POCKET TRANSIT OR COMPASS, COMMON HANDTOOLS

REFERENCES:

T.O. 31R2-2G-321

CONDITIONS CUES:

COND: DURING OPERATION ONLY

CUE: UPON DEPLOYMENT OR LOCATION CHANGE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI

304X6 R 0711 .00 22.0 16.0 14.0 5.0 4.05

304X6 R 0713 .00 15.0 13.0 12.0 3.0 4.22

304X6 R 0716 .00 18.0 14.0 13.0 4.0 4.41

ACTIVITIES SKILL KNOWLEDGE:

A SELECT SITE

A CLEAR AREA

A ASCERTAIN AZIMUTH

A POSITION MOBILIZER

A POSITION FOOT PADS

A ANCHOR MOBILIZER

A ATTACH GROUNDING ROD

A REMOVE PANEL REFLECTORS FROM STOWED POSITION

A INSTALL PANEL REFLECTORS ON HUB

A ERECT FEEDHORN ASSEMBLY

A LEVEL ANTENNA ASSEMBLY

A SET-UP GENERATOR

A APPLY POWER TO ANTENNA ERECTION ACTUATOR

A RELEASE LOCKING MECHANISM

A ERECT ANTENNA TO HIGH OR LOW SECTOR POSITION

A LEVEL AZIMUTH AND ELEVATION DATA BOXES

A ATTACH CABLES TO VAN

A RECALL SITE SELECTION PROCEDURES, LEVEL, CLEAR OF OBSTACLES

OSR JOB INVENTORY TASK STATEMENTS:

6 R0711 A INSTALL OR REMOVE POWER GENERATING EQUIPMENT

6 R0713 A INSTALL OR REMOVE TRACKING ANTENNA GROUPS

6 R0716 A PREPARE MOBILITY SITE FOR INSTALLATION

TASK #: 04750

INITIAL SET-UP OF AN/GSC-49 SATELLITE COMMUNICATIONS TERMINAL

DUTY CODE: X6

TASK STATUS: 3-KP

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, NONE, NONE

HOW OFTEN: WEEKLY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R5-2GSC49-1 AND 31R5-2TSC_101

TTT: 5

SME OPINION: 3

EQUIPMENT:

SPECTRUM ANALYZER, ANTENNA CONTROL

REFERENCES:

T.O. 31R5-2GSC49-1

T.O. 31R5-2TSC-101

CONDITIONS CUES:

COND: DURING OPERATION ONLY

CUE: UPON DEPLOYMENT OR LOCATION CHANGE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE IJOB 1ENL 5SKL 7SKL TD ATI
 304X6 H 0183 .00 39.0 45.0 43.0 22.0 5.40
 304X6 H 0175 .00 41.0 44.0 41.0 18.0 4.94
 304X6 H 0187 .00 10.0 11.0 13.0 11.0 5.33

ACTIVITIES SKILL KNOWLEDGE:

- A APPLY POWER TO ANTENNA CONTROL
- A ELEVATE TO SPECULATED POSITION
- A VERIFY NO FAULT INDICATORS LIT
- A SWEEP AZIMUTH AND ELEVATION UNTIL MAXIMUM SIGNAL ACQUIRED ON SPECTRUM ANALYZER
- A PLACE REMOTE SWITCH TO AUTO TRACK
- A APPLY POWER TO JSC-28 MODEM AND RACK EQUIPMENT
- A APPLY POWER TO PLASMA DISPLAY
- A LOAD PROGRAM TO CONTROL SYNCHRONIZATION UNIT (CSU)
- A LOAD PERIMETER DATA USING PLASMA DISPLAY
- A ENTER SATELLITE COMMUNICATIONS NETWORK
- A UPDATE CESIUM BEAM CLOCK AS REQUIRED
- A SCHEDULE RECEIVER/TRANSMITTERS FOR USER DATA
- A APPLY POWER TO HIGH POWER AMPLIFIER
- A PATCH TELETYPE TO TERMINAL
- K RECALL THEORY OF PATCH PANELS

OSR JOB INVENTORY TASK STATEMENTS:

- 6 H0183 A PERFORM ACQUISITION FUNCTIONS
- 6 H0175 A CONFIGURE TERMINAL EQUIPMENT FOR CORRECT SATELLITE MODE
- 6 H0187 A REVIEW MISSION DATA FOR PREMISSION SETUP

TASK #: 04760

INSPECT KY-801/GSC ENCODER/DECODER

DUTY CODE: X6

TASK STATUS: 3-OJT

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: MINGR, NONE, NONE
 HOW OFTEN: 1, 7, 14, 28, 56, 168
 OJT TRAINABLE: YES, YES
 QTP ADEQUATE: NO (DOESN'T COVER THIS TASK)
 TNG REFERENCE(S): QTP 304X6-30GC

TTT: 3

SME OPINION: 3

KY-801/GSC ISN'T ALIGNED

EQUIPMENT:

BITE, TCOL KIT

REFERENCES:

T.O. 31R5-2GSC-101

CONDITIONS CUES:

COND: SYSTEM UP/DOWN

CUE: PMI OR SYSTEM ALARM

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE IJOB 1ENL 5SKL 7SKL TD ATI
 304X6 I 0205 .00 72.0 70.0 67.0 25.0 2.51

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM KY-801 LAMP TEST
- A CHECK KY-801 (ENCODER/DECODER) SWITCH, CONTROL AND INDICATOR FOR NORMAL INDICATIONS
- A CHECK KY-801 FAN OPERATION
- A PERFORM KY-801 OFF-LINE SELF TEST
- A CHECK KY-801 FOR COMPLETENESS AND SERVICEABILITY
- A CHECK KY-801 SPARE PARTS FOR GENERAL CONDITION AND METHOD OF STORAGE

OSR JOB INVENTORY TASK STATEMENTS:

- 6 I0205 A PERFORM DAILY OR WEEKLY METER READINGS

TASK #: 04770
TROUBLESHOOT KY-801/GSC ENCODER/DECODER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: SEMI-ANNUALLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO (COVERS ONLY ANALYSIS)
TNG REFERENCE(S): QTP 304X6-30GC
TTT: 3
SME OPINION: 5
EQUIPMENT:
DIGITAL MULTIMETER, BITE, TOOL KIT, SOLDERING KIT
REFERENCES:
T.O. 31R5-2GSC-101
T.O. 31R5-2GSC-104
CONDITIONS CUES:
COND: EQUIPMENT UP/DOWN, POWER ON/OFF
CUE: FAILED PMI, COMPONENT REPLACEMENT, SYSTEM FAILURE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0629 .00 25.0 26.0 25.0 6.0 5.64
ACTIVITIES SKILL KNOWLEDGE:
A REMOVE/REPLACE KY801 ENCODER/DECODER AND PARTS
A ISOLATE FAULTY KY-801 SWITCHES
A ISOLATE FAULTY KY-801 FUSE HOLDER ASSEMBLY
A ISOLATE FAULTY KY-801 FAN ASSEMBLY
A ISOLATE FAULTY KY-801 POWER TRANSFORMER
A ISOLATE FAULTY KY-801 CAPACITORS
A ISOLATE FAULTY KY-801 CIRCUIT CARD ASSEMBLIES
A ISOLATE FAULTY KY-801 CABLE ASSEMBLIES
A ISOLATE FAULTY KY-801 DIODES
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0629 K ISOLATE MALFUNCTIONS IN BITE

TASK #: 04780
ALIGN/ADJUST KY-801/GSC ENCODER/DECODER
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO (DOESN'T COVER THIS TASK)
TNG REFERENCE(S): QTP 304X6-30GC
TTT: NONE
SME OPINION: 5
EQUIPMENT:
TOOL KIT
REFERENCES:
T.O. 31R5-2GSC-101
CONDITIONS CUES:
COND: POWER OFF/ON
CUE: FAILED KY-801/GSC
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0665 .00 17.0 20.0 19.0 9.0 3.90
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT ARRANGEMENT OF CIRCUIT CARD STRAPS AND ADJUST
STRAPS FOR LINK REQUIREMENTS
S USE COMMON HANDTOOLS
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0665 A PERFORM PMIS ON CRYPTO EQUIPMENT

TASK #: 04790
INSPECT MD-1002 MODEM DIGITAL DATA
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 1, 7, 28, 56, 168
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30GC
TTT: 3
SME OPINION: 5
EQUIPMENT:
TOOL SET, OSCILLOSCOPE, DIGITAL VOLTMETER, FREQUENCY COUNTER,
PATTERN GENERATOR, ERROR COUNTER, TS-3580 TEST SET, TELETYPE,
BNC CABLES, N-TYPE CABLES, ISOLATION PROBES, SPECTRUM ANALYZER
CLEANING SUPPLIES (RAGS, SOLVENT, VACUUM), LIGHT-WEIGHT GREASE,
PAINT PRIMER/FINISH
REFERENCES:
T.O. 31R5-2G-281
T.O. 31Z1-11-6WC-1
CONDITIONS CUES:
COND: SATELLITE COMMUNICATIONS TERMINAL, DAY/NIGHT, POWER ON,
EQUIPMENT RELEASED, SAFETY OBSERVER
CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 0 0540 .00 22.0 28.0 28.0 15.0 6.17
304X6 0 0541 .00 13.0 24.0 25.0 12.0 6.37
ACTIVITIES SKILL KNOWLEDGE:
A CHECK DATA RATES
A CHECK MODEM CONFIGURATION
A SET SWITCHES AND CONTROLS
A VERIFY METER READINGS
A CHECK RECEIVE SIGNAL QUALITY
A CHECK TRANSMIT/RECEIVE SIGNAL ACCURACY
A CHECK MODEM PERFORMANCE AGAINST OPTIMAL STANDARD
A PERFORM CLEANING
A PERFORM LUBRICATION
A INSPECT EQUIPMENT RACKS
A CHECK AIRFLOW THROUGH EQUIPMENT/RACKS
OSR JOB INVENTORY TASK STATEMENTS:
6 00540 A PERFORM IN-HOUSE MODEM CHARACTERIZATIONS
6 00541 A PERFORM LINK CHARACTERIZATION TESTS ON MODEMS

TASK #: 04800
TROUBLESHOOT MD-1002 MODEM DIGITAL DATA
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: SEMI-ANNUAL
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: YES
TNG REFERENCE(S): QTP 304X6-30GC
TTT: 3
SME OPINION: 5
TASK IS EXCEPTIONALLY COMPLEX AND REQUIRES A SKILLED TRAINER
EQUIPMENT:
TOOL SET, OSCILLOSCOPE, DIGITAL VOLTMETER, FREQUENCY COUNTER,
PATTERN GENERATOR, ERROR COUNTER, TS-3580 TEST SET, TELETYPE,
BNC CABLES, N-TYPE CABLES, ISOLATION PROBES, SPECTRUM ANALYZER
CLEANING SUPPLIES (RAGS, SOLVENT, VACUUM), SOLDERING KIT, CARD
PULLERS
REFERENCES:
T.O. 31R5-2G-282
T.O. 31R5-2G-281
T.O. 31R5-2G-284-2
CONDITIONS CUES:
COND: SATELLITE COMMUNICATIONS TERMINAL, DAY/NIGHT, EQUIPMENT
RELEASED, POWER ON, SAFETY OBSERVER
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATIONS, VISUAL/AUDIO
ALARM INDICATIONS, TROUBLESHOO FINDINGS, USER COMPLAINTS
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 O 0532 .00 22.0 25.0 27.0 14.0 6.23

ACTIVITIES SKILL KNOWLEDGE:

- K ISOLATE FAULTY CIRCUIT CARD CONNECTORS
- K ISOLATE FAULTY CIRCUIT CARDS
- K ISOLATE FAULTY INTERCONNECTING WIRING
- K ISOLATE FAULTY SWITCHES
- K ISOLATE FAULTY LAMPS
- K ISOLATE FAULTY RIGID COAX CABLES
- K ISOLATE FAULTY PIZEO-ELECTRIC DEVICES (AUDIO ALARM)
- K PERFORM SCIENTIFIC NOTATION CONVERSIONS
- A REMOVE/REPLACE CIRCUIT CARDS AND PARTS

OSR JOB INVENTORY TASK STATEMENTS:

6 00532 K ISOLATE MALFUNCTIONS TO QPSK MODEMS

TASK #: 04810

ALIGN/ADJUST MD-1002 MODEM DIGITAL DATA

DUTY CODE: X6

TASK STATUS: 3-K

TIMES ANALYZED: 2

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: SEMI-ANNUAL

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)

QTP ADEQUATE: YES

TNG REFERENCE(S): QTP 304X6-30GC

TTT: 3

SME OPINION: 5

THIS TASK IS EXCEPTIONALLY COMPLEX AND REQUIRES A SKILLED TRAINER.

WITHIN THIS SYSTEM THERE ARE TWO SEPARATE CHANNELS FOR BOTH

TRANSMIT AND RECEIVE. THE A/A LISTED MUST BE DONE FOR EACH
CHANNEL IN ORDER FOR THE SYSTEM TO FUNCTION PROPERLY

EQUIPMENT:

TOOL SET, OSCILLOSCOPE, DIGITAL VOLTMETER, FREQUENCY COUNTER,
PATTERN GENERATOR, ERROR COUNTER, TS-3580 TEST SET, TELETYPE,
BNC CABLES, N-TYPE CABLES, ISOLATION PROBES, SPECTRUM ANALYZER
CLEANING SUPPLIES (RAGS, SOLVENT, VACUUM), EXTENDER CARD, CARD PULLERS

REFERENCES:

T.O. 31R5-2G-282, T.O. 31RS-2G-281, T.O. 31R5-2G-284-2

CONDITIONS CUES:

COND: SATELLITE COMMUNICATIONS TERMINAL, DAY/NIGHT, PROPER
ALIGNMENT TAKES 24 HRS TO COMPLETE, POWER ON,
EQUIPMENT RELEASED, SAFETY OBSERVER

CUE: PHI FINDINGS, USER COMPLAINTS, AUDIO/VISUAL ALARM INDICATIONS

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 O 0522 .00 19.0 24.0 24.0 15.0 7.89
304X6 Q 0608 .00 10.0 10.0 10.0 4.0 5.35

ACTIVITIES SKILL KNOWLEDGE:

- A ADJUST POWER SUPPLY
- A ADJUST CLOCK
- A ALIGN/ADJUST CIRCUIT CARDS
- A ALIGN TRANSMIT FREQUENCY SYNTHESIZER
- A VERIFY TRANSMIT INPUT DATA RATE
- K PERFORM SCIENTIFIC NOTATION CONVERSIONS
- A ALIGN RECEIVE FREQUENCY SYNTHESIZER
- A ADJUST MODULATOR OUTPUT POWER
- A ADJUST DEMODULATOR AUTOMATIC GAIN CONTROL LEVEL
- A ADJUST POST MULTIPLIER AUTOMATIC GAIN CONTROL LEVEL
- A ADJUST DEMODULATOR ACQUISITION THRESHOLD
- A ADJUST DEMODULATOR PHASE
- A ALIGN RECEIVE BIT SYNCHRONIZER
- A ALIGN ENCODER SWITCH TIMING
- A ALIGN RECEIVE BIT SYNCHRONIZER ALARM THRESHOLD
- A ALIGN PHASE CONTROL INTERGRATER
- A ALIGN DATA DETECTOR AND DRIVER
- A ALIGN PHASE ADJUST AND DETECTOR DRIVER
- A ALIGN 70MHZ GAIN CONTROL AMPLIFIER
- A ALIGN COHERENT DETECTOR AND AUTOMATIC GAIN CONTROL LOOP AMPLIFIER
- A ALIGN MULTIPLIER
- A ALIGN PHASE LOCK LOOP AMPLIFIER AND SWEEP CIRCIUT
- A ALIGN TIMING AND AUTOMATIC GAIN CONTROL
- A ALIGN PHASE CONTROL INTERGRATOR
- A ALIGN STABLE CLOCK

OSR JOB INVENTORY TASK STATEMENTS:

6 Q0608 A ALIGN ANALOG-TO-DIGITAL CONVERTER COMPONENTS

6 00522 A ALIGN QUADRAPHASE SHIFT KEYING (QPSK) MODEM COMPONENTS

TASK #: 04820
INSPECT AN/MSC-64
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 7, 28, 56
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2MSC64-2-1
TTT: 5
SME OPINION: 3
EQUIPMENT:
CLEANING SUPPLIES
REFERENCES:
T.O. 31R5-2MSC64-2-1
CONDITIONS CUES:
COND: IN SERVICE,
CUE: PMI
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0168 .00 81.0 81.0 76.0 43.0 3.82
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CLEAN EQUIPMENT EXTERIOR
A REMOVE, CLEAN, AND REPLACE AIR FILTERS
A PERFORM BIT ERROR RATE SELF TEST
OSR JOB INVENTORY TASK STATEMENTS:
6 G0168 A READ METERS OR PERFORM BITE TESTS TO DETERMINE EQUIPMENT OPERATION OR SIGNAL QUALITY

TASK #: 04830
TROUBLESHOOT AN/MSC-64 FORCE TERMINAL UHF AND REMOTE RACKS AND CABLING
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, BLOCK DIAGRAMS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2MSC64-2-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
BUILT IN TEST EQUIPMENT, ELECTROSTATIC DISCHARGE STRAP
REFERENCES:
T.O. 31R5-2MSC64-2-1
CONDITIONS CUES:
COND: IN SERVICE
CUE: OPERATOR COMPLAINT, FAULT ALARMS
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 R 0708 .00 30.0 27.0 22.0 5.0 4.06
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM BITE SELF DIAGNOSTIC TEST
A CHECK CABLING AND CONNECTORS FOR OBVIOUS DEFECTS
A REFERENCE T.O. TO DETERMINE FAULTY MODULE INDICATED BY BITE
A ELIMINATE OTHER POSSIBLE FAULTS ACCORDING TO T.O.
A REMOVE AND REPLACE INDICATED MODULE
OSR JOB INVENTORY TASK STATEMENTS:
6 R0708 A INSTALL OR REMOVE CABLING BETWEEN SITE VANS

TASK #: 04840
TROUBLESHOOT AN/MSC-64 POWER SUPPLY
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 2
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: INDEFINITE
OJT TRAINABLE: YES, NO, BASIC ELECTRONICS, BLOCK DIAGRAMS
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R5-2MSC64-2-1
TTT: 5
SME OPINION: 5
EQUIPMENT:
BUILT IN TEST EQUIPMENT, DIGITAL MULTIMETER, OSCILLOSCOPE,
ELECTROSTATIC DISCHARGE STRAP, SOLDERING KIT
REFERENCES:
T.O. 31R5-2MSC64-2-1
CONDITIONS CUES:
COND: IN SERVICE
CUE: OPERATOR COMPLAINT, FAULT ALARMS, OUTPUT VOLTAGE OUT OF
SPECIFICATIONS
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0685 .00 21.0 24.0 26.0 11.0 4.01
ACTIVITIES SKILL KNOWLEDGE:
A CHECK FAULT ALARMS/STATUS PANEL
A CHECK POWER SUPPLY OUTPUT VOLTAGE
K ISOLATE FAULTY CIRCUIT CARDS OR RACK MOUNTED COMPO-
NENTS THROUGH CHECKING OUTPUT AND RIPPLE VOLTAGES
A REMOVE AND REPLACE INDICATED CIRCUIT CARD OR COMPO-
NENT
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0685 A REMOVE OR REPLACE GENERAL PURPOSE POWER SUPPLIES

TASK #: 04880
INSPECT MYSTIC STAR REMOTE SWITCHING UNIT (RSU) COMPONENTS
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 28
OJT TRAINABLE: YES, NO, TEST EQUIPMENT, BASIC ELECTRONICS,
QTP ADEQUATE: NONE
TNG REFERENCE(S): ENGINEERING MANUAL FOR THE MYSTIC STAR
COMMUNICATIONS MANAGEMENT SYSTEM (MSCMS) VOL 2
FROM E-SYSTEMS MELPAR DIVISION, MYSTIC STAR
PREVENTIVE MAINTENANCE REQUIREMENTS AND
SCHEDULES FROM E-SYSTEMS MELPAR DIVISION,
T.O. 31WA-4-366-2, T.O. 31W2-4-365-2,
T.O. 31W2-4-366-2, AND T.O. 31W2-4-367-2
TTT: NONE
SME OPINION: 3
EQUIPMENT:
ACID PROTECTIVE CLOTHING FOR BATTERY FILLING
REFERENCES:
ENGINEERING MANUAL FOR THE MYSTIC STAR
COMMUNICATIONS MANAGEMENT SYSTEM (MSCMS) VOL 2 FROM
E-SYSTEMS MELPAR DIVISION, MYSTIC STAR PREVENTIVE MAINTENANCE
REQUIREMENTS AND SCHEDULES FROM E-SYSTEMS MELPAR DIVISION, AND
T.O. 31WA-4-366-2, T.O. 31W2-4-365-2, T.O. 31W2-4-366-2
T.O. 31W2-4-367-2
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0662 .00 15.0 14.0 12.0 3.0 4.52
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS TO
INCLUDE CORROSION ON MYSTIC STAR REMOTE SWITCHING UNITS (RSU)
A ADD DISTILLED WATER TO PP7210 POWER SUPPLY BATTERIES
AS REQUIRED (PP7210 POWER SUPPLY REQUIRES PROTECTIVE
GLOVES, GOGGLES, AND CLOTHING FOR CLEANING)
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0662 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
ANALOG-TO-DIGITAL CONVERTERS

TASK #: 04890
TROUBLESHOOT MYSTIC STAR REMOTE SWITCHING UNIT (RSU)
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, NONE
HOW OFTEN: 28 OR SIX MONTHS
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31W2-4-365-2 AND T.O. 00-25-234
TTT: 3
SME OPINION: 3
EQUIPMENT:
SOLDERING KIT, SIGNAL GENERATOR
REFERENCES:
T.O. 31W2-4-365-2
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: PMI OR RESULT OF TROUBLESHOOTING
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0218 .00 27.0 39.0 43.0 25.0 3.31
304X6 Q 0687 .00 23.0 30.0 33.0 13.0 5.10
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM UHF RADIO SET CONTROL 373T-2 (CONTROL HEAD)
SELF TEST
A PERFORM REMOTE CONTROL UNIT 373V-1 (TE-240 MODEM)
SELF TEST
A POWER DOWN EQUIPMENT
A REMOVE CANNON PLUGS OR RF CABLE CONNECTORS
A ISOLATE FAULTY LINE REPLACEABLE UNITS (LRU), CIRCUIT
CARDS, AND PARTS
A REMOVE AND REPLACE LINE REPLACEABLE UNITS (LRU),
CIRCUIT CARDS AND PARTS
A CONNECT CANNON PLUGS OR RF CABLE CONNECTORS
A POWER UP EQUIPMENT
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0687 A REMOVE OR REPLACE INTERCONNECT CABLES AND CHASSIS
WIRING
6 I0218 A REMOVE OR REPLACE LINE REPLACEABLE UNITS (LRU)

TASK #: 04880
INSPECT MYSTIC STAR REMOTE SWITCHING UNIT (RSU) COMPONENTS
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:

TASK #: 04900
INSPECT OM-70/U MONITOR SATELLITE SYSTEM GROUP (AAMS)
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 4

TNOTES:
CONSEQUENCES: MINOR, DAMAGE, INJURY
HOW OFTEN: DAILY, WEEKLY, MONTHLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31R2-4-644-6WC-1
TTT: 3
SME OPINION: 3

EQUIPMENT:
INSPECTION MIRROR, FLASHLIGHT, TOOL BOX
REFERENCES:
T.O. 31R2-4-644-6WC-1

CONDITIONS CUES:
COND: MASTER CONTROL CENTER, DAY/NIGHT, POWER ON, EQUIPMENT
MAY BE RELEASED, 1-MAN
CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATION

JOB STANDARDS:

IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL. 7SKL TD ATI
304X6 G 0162 .00 73.0 76.0 72.0 33.0 5.06
304X6 L 0395 .00 23.0 21.0 21.0 9.0 3.71
304X6 Q 0669 .00 4.0 7.0 9.0 3.0 3.94

ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A INSPECT CABLES
A INSPECT CIRCUIT BREAKER PANELS
A INSPECT INPUT/OUTPUT CONNECTORS
A INSPECT CABINET POWER INDICATORS
A INSPECT SERVICE OUTLET PANELS
A INSPECT BASEBAND CONTROL KEYBOARDS
A INSPECT PLASMA DISPLAYS
A INSPECT MAGNETIC TAPE UNITS
A INSPECT CPU POWER SUPPLY
A INSPECT COMPUTER PROCESSOR UNIT (CPU)
A INSPECT DISK UNIT
A INSPECT RF PATCH PANEL
A INSPECT RF SECTIONS
A INSPECT BASEBAND SECTION
A INSPECT FREQUENCY STANDARD SECTION
A INSPECT BLOWER ASSEMBLIES
A INSPECT HIGH SPEED PRINTER

OSR JOB INVENTORY TASK STATEMENTS:
6 G0162 A PERFORM PREOPERATIONAL OR OPERATIONAL CHECKS OF
EQUIPMENT
6 Q0669 A PERFORM PMIS ON HIGH SPEED PRINTERS
6 L0395 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
AIR COOLING SYSTEMS
6 G0162 A PERFORM PREOPERATIONAL OR OPERATIONAL CHECKS OF
EQUIPMENT
6 Q0669 A PERFORM PMIS ON HIGH SPEED PRINTERS
6 L0395 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON
AIR COOLING SYSTEMS

TASK #: 04910
TROUBLESHOOT OM-70/U MONITOR SATELLITE SYSTEM GROUP (AAMS)
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: BI-WEEKLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31R2-554-1
TTT: 3
SME OPINION: 3
TROUBLESHOOTING IS DONE USING BUILT-IN TEST EQUIPMENT LOCATED
IN CPU. THIS CPU IS ISOLATE FAULTY TO LRU'S LISTED.
EQUIPMENT:
FREQUENCY COUNTER, DIGITAL MULTIMETER, OSCILLOSCOPE, SIGNAL
GENERATOR, SPECTRUM ANALYZER, TOOL BOX, BUILT-IN TEST EQUIP-
MENT, AN/GSC-44 GROUND SATELLITE COMMUNICATIONS TERMINAL,
SOLDERING KIT
REFERENCES:
T.O. 31R2-554-1
CONDITIONS CUES:
COND: MASTER CONTROL CENTER, DAY/NIGHT, POWER ON, EQUIPMENT
RELEASED, 2-MAN
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, BUILT-IN TEST
EQUIPMENT INDICATION, AUDIO/VISUAL ALARMS, OPERATOR
COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 I 0218 .00 27.0 39.0 43.0 25.0 3.31
304X6 L 0325 .00 3.0 9.0 11.0 6.0 6.05
304X6 Q 0629 .00 25.0 26.0 25.0 6.0 5.64
ACTIVITIES SKILL KNOWLEDGE:
A CHECK RECEIVE RF SUBSECTION AN/GSC-44
A PERFORM OPERATION CHECK OF SYSTEM WITH BITE
K INTERPRET MAJOR ALARM ERROR CODES TO COMPLETE SYSTEM
TROUBLESHOOTING.
K APPLY ELECTRO-MECHANICAL THEORY OF OPERATION
S HIGH RELIABILITY SOLDERING
K ISOLATE FAULTY CIRCUIT BREAKER PANELS
K ISOLATE FAULTY INPUT/OUTPUT CONNECTORS
K ISOLATE FAULTY CABINET POWER INDICATORS
K ISOLATE FAULTY SERVICE OUTLET PANELS
K ISOLATE FAULTY BASEBAND CONTROL KEYBOARDS
K ISOLATE FAULTY PLASMA DISPLAYS
K ISOLATE FAULTY MAGNETIC TAPE UNITS
K ISOLATE FAULTY CPU POWER SUPPLY
K ISOLATE FAULTY COMPUTER PROCESSOR UNIT (CPU)
K ISOLATE FAULTY DISK UNIT
K ISOLATE FAULTY RF PATCH PANEL
K ISOLATE FAULTY RF SECTIONS
K ISOLATE FAULTY BASEBAND SECTION
K ISOLATE FAULTY FREQUENCY STANDARD SECTION
K ISOLATE FAULTY BLOWER ASSEMBLIES
A REMOVE/REPLACE LINE REPLACEABLE UNITS, PARTS, AND
SEPARATE COMPONENTS.
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0629 K ISOLATE MALFUNCTIONS IN BITE
6 L0325 K ISOLATE MALFUNCTIONS IN CENTRAL PROCESSING UNITS
(CPU)
6 I0218 A REMOVE OR REPLACE LINE REPLACEABLE UNITS (LRU)

TASK #: 04920
ALIGN/ADJUST OM-70/U MONITOR SATELLITE SYSTEM GROUP (AAMS)
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 4
TNOTES:
CONSEQUENCES: MAJOR, DAMAGE, INJURY
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
QTP REFERENCE(S): T.O. 31R2-4-554-1
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL BOX, OSCILLOSCOPE, DIGITAL MULTIMETER
REFERENCES:
T.O. 31R2-4-554-1
CONDITIONS CUES:
COND: MASTER CONTROL CENTER, DAY/NIGHT, POWER ON/OFF, EQUIPMENT RELEASED, 2-MAN
CUE: PMI FINDINGS, QUALITY CONTROL EVALUATION, BUILT-IN TEST EQUIPMENT INDICATION, AUDIO/VISUAL ALARM INDICATIONS, OPERATOR COMPLAINT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0621 .00 4.0 5.0 4.0 3.0 5.47
304X6 M 0447 .00 3.0 4.0 6.0 2.0 5.29
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST PRINT HEAD GAP ON LOW SPEED PRINTER
A CALIBRATE FREQUENCY OF FREQUENCY STANDARD SECTION
A ADJUST BELT TENSIONS ON AUDIO RECORDER
K APPLY ELECTRO-MECHANICAL THEORY OF OPERATION
OSR JOB INVENTORY TASK STATEMENTS:
6 M0447 A ALIGN FREQUENCY GENERATOR COMPONENTS
6 Q0621 A ALIGN LOW SPEED PRINTERS

TASK #: 04930
INSPECT OM73(V)G MODEM GROUP
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: DAILY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-4-619-1 (DRAFT)
TTT: NONE
SME OPINION: 3
NEW EQUIPMENT UNDER WARRANTY
EQUIPMENT:
BITE, TOOL KIT
REFERENCES:
T.O. 31R2-4-619-1 (DRAFT)
CONDITIONS CUES:
COND: POWER ON, EQUIPMENT ON/OFF LINE
CUE: OPERATION CHECK, DAILY SYSTEM CHECK
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 O 0546 .00 18.0 21.0 22.0 7.0 4.49
ACTIVITIES SKILL KNOWLEDGE:
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A CHECK LAMP/ALARM INDICATORS
A CLEAN CABINET EXTERIOR
OSR JOB INVENTORY TASK STATEMENTS:
6 00546 A PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON SPSK MODEMS

TASK #: 04940
TROUBLESHOOT GM73(V)G MODEM GROUP
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: INDEFINITE
QJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 3IR2-4-619-1 (DRAFT)
TTT: NONE
SME OPINION: 5
EQUIPMENT:
TOOL KIT, BITE, DIGITAL MULTIMETER, ELECTRONIC TOOL KITS
(TK-100G, TK-101G, AND TK-105G), ESD HANDLING EQUIPMENT,
WATTMETER
REFERENCES:
T.O. 3IR2-4-619-1 (DRAFT)
CONDITIONS CUES:
COND: EQUIPMENT ON/OFF LINE, POWER ON/OFF
CUE: FAILED INSPECTION, ALARM
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0551 .00 26.0 30.0 28.0 8.0 5.59
304X6 O 0526 .00 17.0 18.0 20.0 11.0 6.30
304X6 O 0532 .09 22.0 25.0 27.0 14.0 6.23
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM SELF-TEST PROCEDURES FOR CONTROLLER, MODULATOR, AND DEMODULATOR
A TROUBLESHOOT MODULE POWER-UP
A TROUBLESHOOT SYSTEM ALARMS
K ISOLATE FAULTY CIRCUIT CARDS AND ASSOCIATED PARTS
A REMOVE/REPLACE CONTROLLER CIRCUIT CARD AND OTHER PARTS
A REMOVE/REPLACE MODULATOR CIRCUIT CARDS AND OTHER PARTS
A REMOVE/REPLACE DEMODULATOR CIRCUIT CARDS AND OTHER PARTS
OSR JOB INVENTORY TASK STATEMENTS:
6 00526 K ISOLATE MALFUNCTIONS TO BPSK MODEMS
6 00551 K ISOLATE MALFUNCTIONS TO LINE MODEM UNITS (LMU)
6 00532 K ISOLATE MALFUNCTIONS TO QPSK MODEMS

TASK #: 04950

INSPECT AN/TSC-86 COMMUNICATION TERMINAL (AFSATCOM)

DUTY CODE: X6

TASK STATUS: 3-KP

TIMES ANALYZED: 4

TNOTES:

CONSEQUENCES: MINOR, DAMAGE, NONE

HOW OFTEN: 7, 28, 56, 84, 168

GJT TRAINABLE: YES

TNG ADEQUATE: NONE FOR SYSTEM

QTP REFERENCE(S): QTP 300X0-308 (CORROSION CONTROL),
QTP 300X0-30G QUALITY CONTROL, QTP 300S0-30R
(TEST EQUIPMENT) NO SYSTEM TO

TTT: N/A

SME OPINION: 3

PERFORMANCE CHECKS ARE ONLY DONE WHEN TRAINING, TROUBLESHOOTING,
AFTER R/R AND A/A.

EQUIPMENT:

TOOL KIT, DIGITAL MULTIMETER, SIGNAL GENERATOR, RF THROUGH-LINE WATTMETER, RF MILLI-VOLTmeter, VACUUM, CLEANING SUPPLIES (RAGS, SOLVENTS), GENERAL PURPOSE GREASE AND OIL, GREASE AND OIL GUN

REFERENCES:

T.O. 31R2-2TSC88-GHC-1, T.O. 31R2-2TSC88-1, T.O. 31R2-2TSC88-2
T.O. 31R2-2TSC88-3, T.O. 31R2-2TSC88-4

CONDITIONS CUES:

COND: IN GARRISON, DAY/NIGHT, FIELD LOCATION, POWER ON/OFF,
2 MAN MINIMUM

CUE: SCHEDULED PMI, QUALITY CONTROL EVALUATIONS, TRAINING,
EXERCISES

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	IENL	SSKL	7SKL	TD	ATI
304X6	G 0166	.00	48.0	56.0	56.0	33.0	4.73	
304X6	L 0389	.00	6.0	10.0	12.0	5.0	4.30	

ACTIVITIES SKILL KNOWLEDGE:

- A CHECK BLOWER FAILURE LAMP
- A CHECK BLOWER MOTOR
- A CHECK PHYSICAL CONDITION OF ELECTRICAL COMPONENTS
- A CHECK PHYSICAL CONDITION OF SHELTER ELECTRICAL COMPONENTS
- A CLEAN AIR INTAKE FILTER
- A CLEAN AIR EXHAUST FILTER
- A CLEAN AIR CONDITION AIR FILTER
- A CLEAN CONSOLE AIR FILTER
- A CHECK RF COMBINER
- A CHECK TRANSMIT/RECEIVE DIRECTIONAL COUPLER
- A CHECK COMBINER
- A CHECK RF LOAD ANTENNA
- A CHECK 1 MHZ DIVIDER
- A CHECK EMERGENCY MESSAGE PROCESSOR BY-PASS (DEGRADATION PROCEDURES)
- A CHECK MESSAGE INPUT/OUTPUT
- A CHECK TELETYPEWITTER
- A CHECK PRINTER
- A CHECK RELAYS
- A CHECK RF CABLES
- A CHECK MULTIPIN CONNECTOR CABLES
- A CHECK ELECTRICAL WIRING
- A CHECK TERMINAL BOARDS
- A CHECK SWITCHES AND CIRCUIT BREAKERS
- A CHECK CHASSIS
- A CHECK CONNECTORS
- A CHECK GROUND RODS
- A CHECK ANTENNA ASSEMBLIES
- A ALIGN ANTENNAS

OSR JOB INVENTORY TASK STATEMENTS:

6 L0389 A PERFORM OPERATIONAL TESTS ON MESSAGE PROCESSOR UNITS

6 G0166 A PERFORM UPLINK RF FREQUENCY AND LEVEL CHECKS

TASK #: 04960
 TROUBLESHOOT AN/TSC-88 COMMUNICATION TERMINAL (AFSATCOM)
 DUTY CODE: X6
 TASK STATUS: 3-K
 TIMES ANALYZED: 3
 TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: MONTHLY OR QUARTERLY
 OJT TRAINABLE: YES
 QTP ADEQUATE: N/A
 TNG REFERENCE(S): T.O. 31R2-2TSC88-1, T.O. 31R2-2TSC88-2,
 T.O. 31R2-2TSC88-3, AND T.O. 31R2-2TSC88-4
 TTT: N/A
 SME OPINION: 3
 REMOVED/REPLACED LRU SENT ACROSS BASE TO DEPOT. TECHNICANS
 DON'T DO ANY REPAIRS.
 EQUIPMENT:
 TOOL KIT, DIGITAL MULTIMETER, BUILT-IN TEST EQUIPMENT, RF
 THROUGH-LINE WATTMETER
 REFERENCES:
 T.O. 31R2-2TSC88-1
 T.O. 31R2-2TSC88-2
 T.O. 31R2-2TSC88-3
 T.O. 31R2-2TSC88-4
 CONDITIONS CUES:
 COND: IN GARRISON, FIELD LOCATION, DAY/NIGHT, POWER ON, EQUIP-
 RELEASED, 2 MAN MINIMUM
 CUE: FMI FINDINGS, QUALITY CONTROL EVALUATIONS, VISUAL
 INDICATIONS, OPERATOR COMPLAINT
 JOB STANDARDS:
 IAH REFERENCES

OSR DATA:	TASK	TE	IJOB	IENL	SSKL	7SKL	TD	ATI
304X6	K 0292	.00	6.0	8.0	9.0	3.0	5.12	
304X6	L 0337	.00	7.0	12.0	14.0	8.0	5.48	
304X6	Q 0655	.00	5.0	6.0	10.0	3.0	4.27	

 ACTIVITIES SKILL KNOWLEDGE:
 K ISOLATE FAULTY HIGH SPEED PRINTER
 K ISOLATE FAULTY TELETYPEWRITER (ASR)
 K ISOLATE FAULTY MAGNETIC TAPE MEMORY
 K ISOLATE FAULTY DIGITAL INTERFACE UNIT (DIU)
 K ISOLATE FAULTY CENTRAL PROCESSING UNIT (CPU)
 K ISOLATE FAULTY PROCESSOR CONTROL UNIT
 K ISOLATE FAULTY COMMAND POST SYNCHRONIZER
 K ISOLATE FAULTY EMERGENCY ACTION MESSAGE ALARM (EAM)
 K ISOLATE FAULTY RECEIVER/TRANSMITTER CONTROL
 K ISOLATE FAULTY MODEM CONTROLS
 X ISOLATE FAULTY WIDE BAND MODEM
 K ISOLATE FAULTY NARROW BAND MODEM
 K ISOLATE FAULTY RECEIVER/TRANSMITTER
 K ISOLATE FAULTY POWER SUPPLIES
 K ISOLATE FAULTY RELAYS
 K ISOLATE FAULTY COMBINERS
 K ISOLATE FAULTY MULTICOUPLERS
 K ISOLATE FAULTY DISTRIBUTION AMPLIFIER
 K ISOLATE FAULTY PREAMPLIFIER
 K ISOLATE FAULTY RADIO FREQUENCY MONITOR PANEL
 K ISOLATE FAULTY HYBRID
 K ISOLATE FAULTY TEST TRANSLATOR
 K ISOLATE FAULTY RADIO FREQUENCY LOAD ANTENNA
 K ISOLATE FAULTY ANTENNA ASSEMBLIES (FIXED, TRACKING)
 A REMOVE/REPLACE SUBASSEMBLIES, MODULES, AND PARTS
 OSR JOB INVENTORY TASK STATEMENTS:
 6 L0337 K ISOLATE MALFUNCTIONS TO AUTOMATIC SEND/RECEIVE (ASR)
 UNITS
 6 K0292 K ISOLATE MALFUNCTIONS TO EMERGENCY ACTION MESSAGE
 (EAM) ALARMS
 6 Q0655 K ISOLATE MALFUNCTIONS TO HIGH SPEED PRINTERS

TASK #: 04970
ALIGN/ADJUST AN/TSC-88 COMMUNICATION TERMINAL (AFSATCOM)
DUTY CODE: X6
TASK STATUS: 3-OJT
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: QUARTERLY
OJT TRAINABLE: YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2TSC88-2
TTT: N/A
SME OPINION: 3
EQUIPMENT:
TOOL KIT, SIGNAL GENERATOR, DIGITAL MULTIMETER, POWER METER,
DUMMY LOAD
REFERENCES:
T.O. 31R2-2TSC88-2
CONDITIONS CUES:
COND: IN GARRISON, FIELD LOCATION, DAY/NIGHT, POWER ON,
EQUIPMENT RELEASED
CUE: PMI FINDING, QUALITY CONTROL EVALUATION, VISUAL
INDICATIONS, ANTENNA ASSEMBLIES MALFUNCTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0621 .00 4.0 5.0 4.0 3.0 5.47
ACTIVITIES SKILL KNOWLEDGE:
A ADJUST VARIABLE COUPLING FOR MAXIMUM COUPLING
A ADJUST VARIABLE COUPLING FOR MINIMUM COUPLING
A ADJUST BRIGHTNESS OF PANEL LIGHTS
A ADJUST SYSTEM PARAMETERS
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0621 A ALIGN LOW SPEED PRINTERS

TASK #: 04980
INSPECT AN/USC-28 SATELLITE COMMUNICATIONS SET
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: DAILY, WEEKLY, SEMI-ANNUALLY, ANNUALLY
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NO, NOT COVERED IN DETAIL
TNG REFERENCE(S): QTP 304X6-30GB
TTT: NONE
SME OPINION: 3
EQUIPMENT:
TOOL KIT, RF POWER METER, DIGITAL DATA TEST SET, LINK SIMULATOR
TEST ADAPTOR, SPECTRUM ANALYZER, LENS PAPER, LENS CLEANING FLUID,
REFERENCES:
T.O. 31S1-2GSC-161, T.O. 31R2-2USC28-1-1
T.O. 31R2-2USC28-1-2, T.O. 31R2-2USC28-1-3
T.O. 31R2-2USC28-1-4, T.O. 31R2-2USC28-1-5
T.O. 31R2-2USC28-1-6, T.O. 31R2-2USC28-1-7
T.O. 31R2-2USC28-1-8, T.O. 31R2-2USC28-4 (PARTS), DCAC 800-E70-9
CONDITIONS CUES:
COND: SYSTEM MUST BE OFF THE AIR FOR QUARTERLY OR ANNUAL INSPECTIONS
CUE: PMI, AFTER REPAIR
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 N 0513 .00 3.0 4.0 5.0 4.0 5.59
304X6 N 0514 .00 23.0 29.0 29.0 20.0 5.33
304X6 N 0515 .00 16.0 26.0 29.0 17.0 5.38
ACTIVITIES SKILL KNOWLEDGE:
A CLEAN PLASMA DISPLAY
A CHECK PLASMA DISPLAY FOR DEAD AREAS
A CLEAN FILTERS AND EQUIPMENT
A CHARACTERIZE THE SYSTEM (PERFORM SYSTEMS PERFORMANCE CHECK)
OSR JOB INVENTORY TASK STATEMENTS:
6 N0513 A PERFORM NETWORK CONTROL (NCT) OPERATION
6 N0514 A PERFORM NETWORK OPERATION (NT)
6 N0515 A PERFORM OPERATOR MAINTENANCE ON SPREAD SPECTRUM SYSTEMS

TASK #: 04990
TROUBLESHOOT AN/USC-28 SATELLITE COMMUNICATIONS SET
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: BI-MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO, NOT COMPLETE
TNG REFERENCE(S): QTP 304X6-30GB
TTT: 3
SME OPINION: 3
EQUIPMENT:
TOOL KIT, ANALOG MULTIMETER, DIGITAL MULTIMETER, OSCILLOSCOPE,
FREQUENCY COUNTER, FREQUENCY CONVERTER, SPECTRUM ANALYZER,
ADAPTERS, TEST LEADS, BOARD EXTRACTOR, CRIMPING TOOLS,
INSERTION AND EXTRACTION TOOLS, SOLDERING KIT, BITE, PORTABLE
GROUNDS (ESD) HANDLING EQUIPMENT
REFERENCES:
T.O. 31R2-2USC28-1-1
T.O. 31R2-2USC28-1-2
T.O. 31R2-2USC28-1-3
T.O. 31R2-2USC28-1-4
T.O. 31R2-2USC28-1-5
T.O. 31R2-2USC28-1-6
T.O. 31R2-2USC28-1-7
T.O. 31R2-2USC28-1-8
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: SYSTEM FAULT DISPLAY
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 N 0506 .00 8.0 16.0 18.0 15.0 5.90
304X6 N 0510 .00 9.0 18.0 20.0 15.0 5.18
304X6 Q 0633 .00 33.0 39.0 40.0 16.0 6.02
ACTIVITIES SKILL KNOWLEDGE:
A ISOLATE FAULTY DRAWER USING VERIFY PROCEDURE
A DIRECT AUTOMATIC FAULT ISOLATION (AFI) TO TEST SPECIFIC TEST POINTS
A CONDUCT SYSTEM LOOPBACK TESTS
A TEST FREQUENCY SYNTHESIZER
A TEST CONTROL TRANSMITTER AND TRANSMIT IF PATCH
A TEST CONTROL SYNCHRONIZATION UNIT (CSU) RECEIVER AND RECEIVE IF PATCH
A TEST COMM R/T DRAWER
A TEST PRIME POWER
A TEST POWER SUPPLIES
A TEST PROGRAMMABLE CONTROLLER
A TEST INTERFACE UNIT AND INTERFACE UNIT POWER SUPPLY
A TEST AFI CIRCUIT
A TEST TIME GENERATOR
A TEST DATA DIRECTOR
A TEST WIRING AND CONNECTOR CONTINUITY
A REMOVE/REPLACE DRAWERS
A REMOVE REPLACE CIRCUIT BOARDS OR MODULES
A REMOVE REPLACE INDIVIDUAL COMPONENTS
K APPLY DOUBLE SIDEBAND SUPPRESSED CARRIER RECEIVER
THEORY OF OPERATION
K APPLY DOUBLE SIDEBAND SUPPRESSED CARRIER TRANSMITTER
THEORY OF OPERATION
K OPERATE BITE
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0633 K ISOLATE MALFUNCTIONS IN FREQUENCY SYNTHESIZERS
6 N0506 K ISOLATE MALFUNCTIONS TO CONTROL SYNCHRONIZATION UNITS (CSU)
6 N0510 K ISOLATE MALFUNCTIONS TO SPREAD SPECTRUM SYSTEM POWER SUPPLY UNITS

TASK #: 05000
ALIGN OR ADJUST AN/USC-28 SATELLITE COMMUNICATIONS SET INTERFACE UNIT
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: YEARLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS)
QTP ADEQUATE: NO
TNG REFERENCE(S): QTP 304X6-30GB
TTT: NONE
SME OPINION: 3
EQUIPMENT:
DIGITAL MULTIMETER, TOOL KIT,
REFERENCES:
T.O. 31R2-2USC28-1-2
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: FAILED PMI OR TROUBLESHOOTING RESULTS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0149 .00 53.0 60.0 58.0 34.0 3.91
304X6 H 0189 .00 23.0 25.0 27.0 16.0 5.25
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST VAX POWER SUPPLY
A ALIGN/ADJUST VA SLC NETWORK VOLTAGE
A ALIGN/ADJUST VAX SLC NETWORK REGULATOR
A ALIGN/ADJUST VLX SLC NETWORK REGULATOR
OSR JOB INVENTORY TASKS:
6 G0149 A ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS
6 H0189 A VERIFY OPERATIONAL READINESS WITH DISTANT TERMINALS

TASK #: 05010
OPERATE AN/USC-28 SATELLITE COMMUNICATIONS SET
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 3
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: DAILY
OJT TRAINABLE: OJT
QTP ADEQUATE: YES, YES
TNG REFERENCE(S): QTP 304X6-30GB
TTT: 3
SME OPINION: 3
EQUIPMENT:
SPECTRUM ANALYZER
REFERENCES:
T.O. 31R2-2USC28-1-1
DCAC 800-E70-9
NETWORK CONTROL BOOK
CONDITIONS CUES:
COND: ON EQUIPMENT
CUE: NETWORK CONTROLLER DIRECTION
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 H 0188 .00 5.0 8.0 6.0 5.0 6.94
304X6 G 0149 .00 53.0 60.0 58.0 34.0 3.91
304X6 H 0189 .00 23.0 25.0 27.0 16.0 5.25
ACTIVITIES SKILL KNOWLEDGE:
A ENERGIZE SYSTEM
A LOAD SOFTWARE
A INITIALIZE NETWORK CONTROL TERMINAL (NCT) OPERATION
A INITIALIZE ALTERNATE NCT OPERATION
A INITIALIZE NETWORK TERMINAL (NT) OPERATION AN/USC-28
SATellite COMMUNICATION SET
A SCHEDULE USER CHANNEL CIRCUITS
A PERFORM NORMAL OPERATION USING BACKUP TELETYPE
A DEENERGIZE SYSTEM
A ANALYZE ANOMALIES
A PERFORM ELECTRONIC COUNTER COUNTERMEASURES
OSR JOB INVENTORY TASK STATEMENTS:
6 G0149 A ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS
6 H0189 A VERIFY OPERATIONAL READINESS WITH DISTANT TERMINALS
6 H0188 A SCHEDULE SATELLITE USERS

TASK #: 05020
INSPECT AN/TSC-94A SATELLITE COMMUNICATONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, INJURY
HOW OFTEN: 56, 168, 336
OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC BACKGROUND
QTP ADEQUATE: NO, NONE
TNG REFERENCE(S): T.O. 31R2-2TSC94-11
TTT: 3
SME OPINION: 3
EQUIPMENT:
HIGH POWER AMPLIFIER (HPA), POWER SUPPLY, CONTROLLER/MONITOR,
MODEM, FUSES, ANTENNAS, ANTENNA CONTROL UNIT, LOW NOISE AMPLIFIER
(LNA), BITE, DOWN CONVERTER, UP CONVERTER, CONTROL TRANSLATER,
THUMBWHEEL FILTER, FM ORDERWIRE PATCH, LOW RATE MULTIPLEXER (LRM)
MULTIPLEXER/DEMULITPLEXER (TSSB), WATTMETER, TOOL BOX,
NON-METALLIC FILAMENT ADJUSTER, INTERIOR/EXTERIOR FILTERS
DRY, LINT FREE CLOTH, BRUSH, CLEANING COMPOUND, OSCILLOSCOPE,
SIGNAL GENERATOR, SPECTRUM ANALYZER, FREQUENCY COUNTER, ANALOG
MUTIMETER, DIGITAL MUTIMETER, DC RESTORER
REFERENCES:
T.O.31R2-2TSC94-11
T.O.31R2-2TSC94-16WC1.
CONDITIONS CUES:
COND: DRY, OUTSIDE, ANTENNA SET UP, CLEAR WEATHER
CUE: PMIS
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 L 0403 .00 51.0 52.0 50.0 18.0 4.05
304X6 O 0539 .00 43.0 47.0 47.0 20.0 5.46
ACTIVITIES SKILL KNOWLEDGE:
A CHECK EQUIPMENT FOR OBVIOUS DEFECTS
A CHECK METER READINGS
A CHECK ANTENNA LAMP AND CONTROLLER MONITOR ALARM
A CHECK SPARE FUSE
A CHECK LAMPS AND ALARMS
A CHECK BLACKOUT SWITCH
A CHECK RECEIVER PERFORMANCE
A CHECK UPCONVERTER PERFORMANCE
A CHECK TRANSLATOR LOOP
A CHECK LRM ALARM RECALL
A CHECK LRM BITE
A CHECK TSSP ALARMS RECALL
A CHECK TSSP DISPLAY
A CHECK FAULT LOCATOR
A CHECK TSSP VOLTAGE CONTROL OSCILLOULATOR(VCXO)
K PERFORM SPECIAL SYSTEM GROUND INSPECTION
K PERFORM SPECIAL ANTENNA CLAMPS AND PILLOW BLOCKS
INSPECTION
K PERFORM SPECIAL BALL JOINTS AND THREADED COUPLINGS
INSPECTION
OSR JOB INVENTORY TASK STATEMENTS:
6 00539 A PERFORM BIT ERROR RATE TESTS ON MODEMS
6 L0403 A PERFORM PMIS ON UP CONVERTERS

TASK #: 05030
 TROUBLESHOOT AN/TSC-94A SATELLITE COMMUNICATIONS TERMINAL
 DUTY CODE: X6
 TASK STATUS: 3-KP
 TIMES ANALYZED: 1
 TNOTES:
 CONSEQUENCES: SERIOUS, DAMAGE, INJURY
 HOW OFTEN: MONTHLY
 OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS
 AND TEST EQUIPMENT)
 QTP ADEQUATE: NONE
 TNG REFERENCE(S): T.O. 31R2-2TSC-11
 TTT: 3
 SME OPINION: 3
 KG-81, KG-84, AND KY-58 EQUIPMENT NOT ANALYZED
 EQUIPMENT:
 TOOL KIT, POWER METER, ATTENUATORS, DIGITAL MULTIMETER, TELEPHONE
 TEST SET, FREQUENCY COUNTER, OSCILLOSCOPE, SIGNAL GENERATOR, DC
 RESTORER, SPECTRUM ANALYZER, ANALOG MULTIMETER
 REFERENCES:
 T.O. 31R2-2TSC-11
 CONDITIONS CUES:
 COND: POWER ON/OFF, ON/OFF SATELLITE LINK
 CUE: PMI FINDING, FAILED EQUIPMENT, USER COMPLAINT, CIRCUIT
 CARD/PARTS REPLACEMENT
 JOB STANDARDS:
 IAW REFERENCES
 OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 J 0228 .00 35.0 52.0 52.0 23.0 6.45
 304X6 K 0285 .00 52.0 60.0 59.0 28.0 5.67
 304X6 Q 0642 .00 11.0 13.0 15.0 9.0 5.42
 ACTIVITIES SKILL KNOWLEDGE:
 A REMOVE/REPLACE AN/TSC-94 ASSEMBLY CIRCUIT CARDS,
 PARTS, AND ASSOCIATED COMPONENTS
 A PERFORM BITE CHECK OF ALL EQUIPMENT ASSEMBLIES
 A PERFORM OPERATION CHECK
 A CHECK RECEIVE SIGNAL
 A CHECK TRANSMIT SIGNAL
 A CHECK FOR FAULTY PATCHES, JACKS, AND CONNECTORS
 A CHECK FOR EQUIPMENT SHORTS UNRELATED TO EQUIPMENT
 FUNCTIONS (CHASSIS SHORTS, GROUNDS, ETC.)
 K ISOLATE FAULTY RCV SHF/AJVV TRACK PATCH
 K ISOLATE FAULTY SB-4227/TSC-94A SHF MON PATCHING PANEL
 K ISOLATE FAULTY C-10273/TSC ANTENNA CONTROL
 K ISOLATE FAULTY C-11375/TSC94A CONTROL MONITOR
 K ISOLATE FAULTY CV-3201B/TSC DOWN CONVERTER
 K ISOLATE FAULTY C-11109A/TSC LNA CONTROL TRANSLATOR
 K ISOLATE FAULTY MX-10635/TSC-94A COHERENT COMBINER
 K ISOLATE FAULTY J-4138/TSC-94A SHF XMT PATCH PANEL
 K ISOLATE FAULTY AM-6701/TSC HIGH POWERED AMPLIFIER
 (HPA)
 K ISOLATE FAULTY PP--7920/TSC-94A HIGH VOLTAGE POWER
 SUPPLY
 K ISOLATE FAULTY CV-31968/TSC
 K ISOLATE FAULTY OA-9212/TSC-94A THUMBWHEEL FILTER
 GROUP
 K ISOLATE FAULTY AS-3036/TSC PARABOLIC ANTENNA (8FT)
 K ISOLATE FAULTY DATA PATCH PANEL
 K ISOLATE FAULTY MD-945/TSC DIGITAL DATA MODEM
 K ISOLATE FAULTY TD-1389/TSC MUX/DEMUX (LRM)
 K ISOLATE FAULTY TD-1357(V)4/G DIGITAL MUX
 K ISOLATE FAULTY MODEM PATCH
 K ISOLATE FAULTY ORDERWIRE PATCH
 K ISOLATE FAULTY RT-1287/TSC ORDERWIRE PATCH
 K ISOLATE FAULTY CV-3896/TSC-944 VOLTAGE CONVERTER
 K ISOLATE FAULTY CV-3841/TSC POWER COVERTERS
 K ISOLATE FAULTY POWER DISTRIBUTION PANEL
 K ISOLATE FAULTY EMI POWER ENTRY PANEL
 K INTERPRET FAULTY ERROR CODES
 OSR JOB INVENTORY TASK STATEMENTS:
 6 J0228 K ISOLATE MALFUNCTIONS IN ANTENNA CONTROLS
 6 K0285 K ISOLATE MALFUNCTIONS IN DOWN CONVERTERS
 6 Q0642 K ISOLATE MALFUNCTIONS IN POWER DISTRIBUTION PANELS

TASK #: 05040
PERFORM OPERATION CHECK OF AN/TSC-94 SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: EVERY OTHER MONTH, UPON DEPLOYMENT
OJT TRAINABLE: YES, YES
OTP ADEQUATE: NONE
TNG REFERENCE(S): T.O.31R2-2TSC94-11
TTT: 3
SME OPINION: 3
EQUIPMENT:
BITE ON EQUIPMENT RACKS, CABLES AND CONNECTORS, HANDTOOLS
REFERENCES:
31R2-2TSC94-11
CONDITIONS CUES:
COND: POWER ON, PARTIAL SATELLITE ACCESS, LOOP TEST MODE
CUE: PMI, AFTER TROUBLESHOOTING OR CIRCUIT CARD/PART
REPLACEMENT, SET-UP/TEARDOWN OF AN/TSC-94
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 G 0156 .00 43.0 50.0 48.0 31.0 4.52
304X6 G 0165 .00 59.0 65.0 63.0 36.0 4.81
304X6 O 0539 .00 43.0 47.0 47.0 20.0 5.46
ACTIVITIES SKILL KNOWLEDGE:
A PERFORM TURN-ON PROCEDURES
A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A SET CONTROLLER-MONITOR SWITCHES
A TUNE UP-CONVERTER AND HIGH POWERED AMPLIFIER
A TUNE DOWN CONVERTER
A SET MODEM SWITCHES
A INSTALL ORDERWIRE PATCHES ON PATCH PANEL
A INSTALL THUMBWHEEL FILTER GROUP PATCHES
A INSTALL TEST PATCHES
A ADJUST TRANSMITTER FOR 20 WATTS
A CHECK CONTROLLER MONITOR PANEL FOR FAULT INDICATION
A SET ORDER WIRE RADIO SWITCHES AND CHECK FOR TEST TONE
INDICATION
K INTERPRET FAULT ERROR CODES
OSR JOB INVENTORY TASK STATEMENTS:
6 00539 A PERFORM BIT ERROR RATE TESTS ON MODEMS
6 G0156 A PERFORM CARRIER NOISE DENSITY CHECKS (C/KT)
6 G0165 A PERFORM TURN-ON OR TURN-OFF PROCEDURES OF EARTH
TERMINALS

TASK #: 05050
ALIGN/ADJUST AN/TSC-94A SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, NONE, NONE
HOW OFTEN: 56, 168, 336
OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC BACKGROUND
QTP ADEQUATE: NO, NONE
TNG REFERENCE(S): T.O. 31R2-2TSC94-11
TTT: 3
SME OPINION: 3
EQUIPMENT:
WATTMETER, PHILLIPS AND STANDARD SCREWDRIVER, TORQUE WRENCH
(SMALL), NON-METALLIC ADJUSTING TOOL, STEP ATTENUATOR, FIXED
ATTENUATOR, LIMITER, TEST CABLE, C/KT TEST CABLES, ADAPTERS,
ELECTRONIC DIGITAL READOUT FREQUENCY COUNTER
REFERENCES:
T.O.31R2-2TSC94-11
T.O.31R2-2TSC94-16WC-1
CONDITIONS CUES:
COND: DRY, INSIDE/OUTSIDE, INCLEMENT WEATHER
CUE: PMI
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0604 .00 4.0 5.0 5.0 1.0 5.08
304X6 K 0276 .00 65.0 65.0 61.0 34.0 2.72
304X6 P 0562 .00 33.0 37.0 34.0 12.0 5.75
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST HIGH POWER AMPLIFIER(HPA)
A ALIGN/ADJUST UP CONVERTER
A ALIGN/ADJUST MD-945 MODEM
A ALIGN/ADJUST DOWN CONVERTER
A ALIGN/ADJUST CONTROL TRANSMITTER LOOP
A CHECK LAMPS AND FUSES
A CHECK LOW RATE MULTIPLEXER(LRM) SELF TEST ON PANELS
A CHECK DIGITAL MULTIPLEXER(TSSP) SELF TEST ON PANELS
A CHECK LOW NOISE AMPLIFIER (LNA) BITE
OSR JOB INVENTORY TASK STATEMENTS:
6 Q0604 A ADJUST BASEBAND AMPLIFIER COMPONENTS
6 K0276 A ADJUST DOWN CONVERTERS TO SPECIFIC CARRIER FREQUENCIES
6 P0562 A ALIGN TRACKING DOWN CONVERTER COMPONENTS
6 K0276 A ADJUST DOWN CONVERTERS TO SPECIFIC CARRIER FREQUENCIES
6 P0562 A ALIGN TRACKING DOWN CONVERTER COMPONENTS
6 Q0604 A ADJUST BASEBAND AMPLIFIER COMPONENTS

TASK #: 05060
SET-UP OR TEAR DOWN AN/TSC-94A SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: MINOR, DAMAGE, NONE
HOW OFTEN: QUARTERLY FOR OPERATION, 6 TIMES ANNUALLY FOR TRAINING
OJT TRAINABLE: YES, YES
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O.31R2-2TSC94-11
TTT: 3
SME OPINION: 3
EQUIPMENT:
MESSAGE FROM HQQTRS WITH SATELLITE LOCATION DATA, AN/TSC-94,
HANDTOOLS, COMPASS (TRANSIT), SLEDGE HAMMER OR MOTOR DRIVEN
DRILL FOR GROUNDING RODS
REFERENCES:
T.O. 31R2-2TSC94-11
CONDITIONS CUES:
COND: NO SET-UP IN HIGH WINDS, 4 MAN CREW (4 FOR ANTENNA LIFT)
CUE: TRAINING, DEPLOYED TO SITE
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 Q 0681 .00 37.0 36.0 37.0 18.0 4.00
304X6 R 0708 .00 30.0 27.0 2.0 5.0 4.06
ACTIVITIES SKILL KNOWLEDGE:
A LOCATE SUITABLE SITE
A LOCATE SATELLITE
A PARK VAN AND REMOVE ANTENNA
A ASSEMBLE ANTENNA FROM STORAGE RACK
A ANCHOR AND ROUGH ALIGN ANTENNA TO SATELLITE
A CONNECT CABLES
A INSTALL GROUNDS (MAY REQUIRE USE OF SPECIAL GEAR)
A SET-UP AND CHECK GENERATOR (DONE BY X6 OCCASIONALLY)
A CONNECT POWER
A INSTALL OR REMOVE CRYPTO EQUIPMENT
A CHECK EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
A TEAR DOWN TSC-94 BY REVERSING STEPS LISTED ABOVE
K SATELLITE LOCATION DETERMINES TSC-94 AND ANTENNA LOCATION
K ENSURE ANTENNA DOESN'T DAMAGE TSC-94 FRONT EQUIPMENT RACKS DURING INSTALLATION AND REMOVAL FROM VAN
OSR JOB INVENTORY TASK STATEMENTS:
6 R0708 A INSTALL OR REMOVE CABLING BETWEEN SITE VANS
6 Q0681 A REMOVE OR REPLACE CRYPTO EQUIPMENT

TASK #: 05070
INSPECT AN/TSC-100 SATELLITE COMMUNICATONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZFD: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 56, 168, 336
OJT TRAINABLE: YES, NO, REQUIRES ELECTRONIC BACKGROUND
QTP ADEQUATE: NO, NONE
TNG REFERENCE(S): T.O. 31R2-2TSC100-16WC-1
TTT: 3
SME OPINION: 5
KG-81, KG-84, AND KY-58 EQUIPMENT NOT ANALYZED
EQUIPMENT:
HIGH POWER AMPLIFIER (HPA), POWER SUPPLY, CONTROLLER/MONITOR,
MODEM, FUSES, ANTENNAS, ANTENNA CONYROL UNIT, LOW NOISE
AMPLIFIER, (LNA), LNA BITE,DOWN CONVERTER, UP CONVERTER, CONTROL
TRANSLATER, THUMBWHEEL FILTER, FM ORDERWIRE PATCH, LOW RATE
MULTIPLEXER (LRM), MULTIPLEXER/DEMULITPLEXER (TSSB), WATTMETER,
TOOL BOX, NON-METALLIC FILAMENT ADJUSTER, INTERIOR/EXTERIOR
FILTERS DRY, LINT FREE CLOTH, BRUSH, CLEANING COMPOUND,
ATTENUATORS, TEST CABLES, CABLE ADAPTERS, ANALOG MULTIMETER,
DIGITAL MULTIMETER, DC RESTORER, FREQUENCY COUNTER, OSCILLOSCOPE,
SIGNAL GENERATOR, SPECTRUM ANALYZER

REFERENCES:
T.O. 31R2-2TSC100-16WC-1

CONDITIONS CUES:
COND: OUTSIDE, ANTENNA SET UP
CUE: PMIS

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	IJOB	IENL	5SKL	7SKL	TD	ATI
304X6	J 0253	.00	28.0	33.0	31.0	9.0	4.40	
	L 0403	.00	51.0	52.0	50.0	18.0	4.05	

ACTIVITIES SKILL KNOWLEDGE:

- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A CHECK METER READINGS
- A CHECK ANTENNA LAMP AND CONTROLLER MONITOR ALARM
- A CHECK SPARE FUSE
- A CHECK LAMPS AND ALARMS
- A CHECK BLACKOUT SWITCH
- A CHECK RECEIVER PERFORMANCE
- A CHECK UPCONVERTER PERFORMANCE
- A CHECK TRANSLATOR LOOP
- A CHECK LRM ALARM RECALL
- A CHECK LRM BITE
- A CHECK TSSP ALARMS RECALL
- A CHECK TSSP DISPLAY
- A CHECK FAULT LOCATOR
- A CHECK TSSP VOLTAGE CONTROL OSCILLATOR(VCXO)
- K PERFORM SPECIAL SYSTEM GROUND INSPECTION
- K PERFORM SPECIAL ANTENNA CLAMPS AND PILLOW BLOCKS
INSPECTION
- K PERFORM SPECIAL BALL JOINTS AND THREADED COUPLINGS
INSPECTION

CSR JOB INVENTORY TASK STATEMENTS:

- 6 J0253 A PERFORM PMIS ON PARABOLIC ANTENNAS
- 6 L0403 A PERFORM PMIS ON UP CONVERTERS

TASK #: 05080

TROUBLESHOOT AN/TSC-100 SATELLITE COMMUNICATIONS TERMINAL

DUTY CODE: X6

TASK STATUS: 3-KP

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: IN CONJUNCTION WITH PMI (NEW SYSTEM)

OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONIC FUNDAMENTALS
AND TEST EQUIPMENT)

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2TSC100-11

TTT: 3

SME OPINION: 3

EQUIPMENT:

TOOL KIT, POWER METER, ATTENUATORS, DIGITAL MULTIMETER, TELEPHONE
TEST SET, FREQUENCY COUNTER, OSCILLOSCOPE, SIGNAL GENERATOR, DC
RESTORER, SPECTRUM ANALYZER

REFERENCES:

T.O. 31R2-2TSC100-11

CONDITIONS CUES:

COND: POWER ON/OFF, ON/OFF SATELLITE LINK

CUE: PMI FINDING, FAILED EQUIPMENT, USER COMPLAINT, CIRCUIT
CARD/PARTS REPLACEMENT

JOB STANDARDS:

IAW REFERENCES

OSR DATA:	TASK	TE	1JOB	1ENL	5SKL	7SKL	TD	ATI
304X6	K 0285	.00	52.0	60.0	59.0	28.0	5.67	
304X6	Q 0629	.00	25.0	26.0	25.0	6.0	5.64	
304X6	Q 0640	.00	27.0	25.0	28.0	13.0	5.68	

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM BITE CHECK OF ALL EQUIPMENT ASSEMBLIES
- A PERFORM OPERATION CHECK
- A CHECK RECEIVE SIGNAL
- A CHECK TRANSMIT SIGNAL
- A CHECK LAMPS AND FUSES
- A CHECK LOW RATE MULTIPLEXER(LRM) SELF TEST ON PANELS
- A CHECK DIGITAL MULTIPLEXER(TSSP) SELF TEST ON PANELS
- A CHECK LOW NOISE AMPLIFIER (LNA) BITE
- A CHECK FOR FAULTY PATCHES, JACKS, AND CONNECTORS
- A CHECK FOR EQUIPMENT SHORTS UNRELATED TO EQUIPMENT
FUNCTIONS (CHASSIS SHORTS, GROUNDS, ETC.)
- A ISOLATE FAULTY AN/TSC100 ASSEMBLY CIRCUIT CARDS,
PARTS, AND ASSOCIATED COMPONENTS
- A REMOVE/REPLACE AN/TSC100 ASSEMBLY CIRCUIT CARDS,
PARTS, AND ASSOCIATED COMPONENTS

OSR JOB INVENTORY TASK STATEMENTS:

6 Q0629 K ISOLATE MALFUNCTIONS IN BITE

6 K0285 K ISOLATE MALFUNCTIONS IN DOWN CONVERTERS

6 Q0640 K ISOLATE MALFUNCTIONS IN PATCH PANELS

TASK #: 05090
ALIGN/ADJUST AN/TSC-100 SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-K
TIMES ANALYZED: 1
TNOTES:
CONSEQUENCES: SERIOUS, DAMAGE, INJURY
HOW OFTEN: 56, 168, 336
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS BACKGROUND)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2TSC100-11 AND 31R2-2G-321
TTT: 3
SME OPINION: 3
EQUIPMENT:
WATTMETER, TOOL KIT, SMALL TORQUE WRENCH, NON-METALLIC ADJUSTING
TOOL, STEP ATTENUATOR, FIXED ATTENUATOR, LIMITER, TEST CABLE,
C/KT TEST CABLES, ADAPTERS, ELECTRONIC DIGITAL READOUT FREQUENCY
COUNTER, BITE GUMMY LOAD, BUILT-N-TEST EQUIPMENT
REFERENCES:
T.O. 31R2-2TSC100-11
T.O. 31R2-2G-321
CONDITIONS CUES:
COND: POWER ON, INSIDE VAN, NOT IN INCLEMENT WEATHER
CUE: PMI, TROUBLESHOOTING SYSTEM, ASSEMBLY CIRCUIT CARD OR PARTS
REPLACEMENT
JOB STANDARDS:
IAW REFERENCES
OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
304X6 K 0276 .00 65.0 65.0 61.0 34.0 2.72
304X6 M 0457 .00 29.0 28.0 26.0 8.0 5.68
ACTIVITIES SKILL KNOWLEDGE:
A ALIGN/ADJUST HIGH POWER AMPLIFIER (HPA)
A ALIGN/ADJUST UP CONVERTER FREQUENCY
A ALIGN/ADJUST MD-945 MODEM
A ALIGN/ADJUST DOWN CONVERTER
A ALIGN/ADJUST CONTROL TRANSMITTER LOOP
K RECOGNIZE OUT OF TOLERANCE LEVEL/FREQUENCY CONDITIONS
OSR JOB INVENTORY TASK STATEMENTS:
6 K0276 A ADJUST DOWN CONVERTERS TO SPECIFIC CARRIER FREQUENCIES
6 M0457 A ALIGN TIME-DIVISION MULTIPLEXERS

TASK #: 05100
PERFORM OPERATION CHECK OF AN/TSC-100 SATELLITE COMMUNICATIONS TERMINAL
DUTY CODE: X6
TASK STATUS: 3-KP
TIMES ANALYZED:
TNOTES:
CONSEQUENCES: SERIOUS, NONE, NONE
HOW OFTEN: MONTHLY
OJT TRAINABLE: YES, NO (TASK REQUIRES ELECTRONICS FUNDAMENTALS)
QTP ADEQUATE: NONE
TNG REFERENCE(S): T.O. 31R2-2TSC100-11 AND 31R2-2G-321
TTT: 3
SME OPINION: 3
EQUIPMENT:
BITE ON EQUIPMENT ASSEMBLIES, CABLES AND CONNECTORS, HANDTOOLS,
DEPLOYMENT MESSAGE OR SIMULATION, SPECTRUM ANALYZER
REFERENCES:
T.O. 31R2-2TSC100-11
T.O. 31R2-2G-321
CONDITIONS CUES:
COND: POWER ON, MONITOR SATELLITE, LOOP TEST MODE
CUE: PMI, AFTER TROUBLESHOOTING OR CIRCUIT CARD/PART
REPLACEMENT, SET-UP OF AN/TSC-100
JOB STANDARDS:
IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 G 0163 .00 44.0 48.0 45.0 22.0 5.54
 304X6 G 0165 .00 59.0 65.0 63.0 36.0 4.81
 304X6 O 0539 .00 43.0 47.0 47.0 20.0 5.46

ACTIVITIES SKILL KNOWLEDGE:

- A PERFORM TURN-ON PROCEDURES
- A INSPECT EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A SET CONTROLLER-MONITOR SWITCHES
- A TUNE UP-CONVERTER AND HIGH POWERED AMPLIFIER
- A TUNE DOWN CONVERTER
- A SET MODEM SWITCHES
- A INSTALL ORDERWIRE PATCHES ON PATCH PANEL
- A INSTALL THUMBWHEEL FILTER GROUP PATCHES
- A TUNE SURFACE ACOUSTIC WAVE FILTER
- A INSTALL TEST PATCHES
- A ADJUST TRANSMITTER FOR 5 WATTS
- A CHECK CONTROLLER MONITOR PANEL FOR FAULT INDICATION
- A SET ORDER WIRE RADIO SWITCHES AND CHECK FOR TEST
- A TUNE RESONANT CAVITY KLYSTRON
- A PERFORM SIGNAL TO NOISE POWER BALANCING TEST TONE INDICATION
- K INTERPRET FAULT ERROR CODES
- K INTERPRET DEPLOYMENT MESSAGE

OSR JOB INVENTORY TASK STATEMENTS:

- 6 00539 A PERFORM BIT ERROR RATE TESTS ON MODEMS
- 6 G0163 A PERFORM RECEIVE LINK GAIN CHECKS
- 6 G0165 A PERFORM TURN-ON OR TURN-OFF PROCEDURES OF EARTH TERMINALS

TASK #: 05110

SET-UP OR TEAR DOWN AN/TSC-100 SATELLITE COMMUNICATIONS TERMINAL

DUTY CODE: X6

TASK STATUS: 3-K

TIMES ANALYZED: 1

TNOTES:

CONSEQUENCES: SERIOUS, DAMAGE, INJURY

HOW OFTEN: MONTHLY

OJT TRAINABLE: YES, YES

QTP ADEQUATE: NONE

TNG REFERENCE(S): T.O. 31R2-2TSC100-11 AND 31P2-2G-321

TTT: 3

SME OPINION: 3

EQUIPMENT:

MESSAGE FROM HQ WITH SATELLITE LOCATION/ACCESS DATA,
 AN/TSC-100, HANDTOOLS, COMPASS (TRANSIT), SLEDGE HAMMER OR MOTOR DRIVEN DRILL FOR GROUNDING RODS, 20 FT QRSAG DS-361 ANTENNA

REFERENCES:

T.O. 31R2-2TSC100-11, T.O. 31R2-2G-321

CONDITIONS CUES:

COND: NO SET-UP IN HIGH WINDS, 3 MAN CREW FOR 20 FT ANTENNA
 (4 MAN FOR 8 FT ANTENNA LIFT)

CUE: TRAINING, DEPLOYED TO SITE

JOB STANDARDS:

IAW REFERENCES

OSR DATA: TASK TE 1JOB 1ENL 5SKL 7SKL TD ATI
 304X6 R 0708 .00 30.0 27.0 22.0 8.8 4.06
 304X6 R 0711 .00 22.0 16.0 14.0 5.0 4.05
 304X6 R 0713 .00 15.0 13.0 12.0 3.0 4.22

ACTIVITIES SKILL KNOWLEDGE:

- A LOCATE SUITABLE SITE
- A LOCATE SATELLITE
- A PARK AND SITE 20FT ANTENNA
- A PARK VAN AND REMOVE 8 FT ANTENNA (IF USED)
- A ASSEMBLE 8FT ANTENNA FROM STORAGE RACK (IF USED)
- A ANCHOR AND ROUGH ALIGN ANTENNA TO SATELLITE
- A ASSEMBLE 20 FT ANTENNA
- A INSTALL GROUNDS (MAY REQUIRE USE OF SPECIAL GEAR)
- A CONNECT CABLES
- A CONNECT POWER (AC 8 OR 60 CYCLE COMMERCIAL POWER)
- A INSTALL, REMOVE, OR KEY CRYPTO EQUIPMENT
- A CHECK EQUIPMENT VISUALLY FOR OBVIOUS DEFECTS
- A TEAR DOWN TSC-100 BY REVERSING STEPS LISTED ABOVE
- K SATELLITE LOCATION DETERMINES TSC-100 AND ANTENNA LOCATION
- K ENSURE ANTENNA DOESN'T DAMAGE TSC-100 FRONT EQUIPMENT RACKS DURING INSTALLATION AND REMOVAL FROM VAN

OSR JOB INVENTORY TASK STATEMENTS:

- 6 R0708 A INSTALL OR REMOVE CABLING BETWEEN SITE VANS
- 6 R0711 A INSTALL OR REMOVE POWER GENERATING EQUIPMENT
- 6 R0713 A INSTALL OR REMOVE TRACKING ANTENNA GROUPS